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Higher Educators Advancing the Disability Standards – Universities online Project

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Lead institution: University of Canberra

Partner institutions: The Australian National University, Australian Association of Special Education and Australian Human Rights Commission

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Project website: < <http://trainwellonline.net/headsup/> >



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List of acronyms used

AATUG	Australasian Adapted Technology User Group
ADCET	Australian Disability Clearinghouse on Education and Training
ANU	The Australian National University
ANSWD	Australasian Network of Students with Disability
ANZSSA	Australia and New Zealand Student Services Association
ALTC	Australian Learning and Teaching Council, now Office for Learning and Teaching (OLT)
ATEND	Australian Tertiary Education Network on Disability
CATS	Creating Accessible Teaching and Supports
DANCR	Disability Adviser Network of the Canberra Region
DDA	Commonwealth Disability Discrimination Act
DEAN	Disability Education Association of NSW / ACT
DO	Disability Office; Disability Officer
DSE	Disability Standards for Education (2005)
EPHEA	Equity Practitioners in Higher Education Australasia
GEL	Guided Experiential Learning
HEADS-UP	Higher Educators Advancing the Disability Standards – Universities online Project (brand name for the Project)
LMS	Learning Management System
NDCO	Network of National Disability Coordination Officers
OLT	Office of Learning and Teaching
SCORM	Shareable Content Object Reference Model
UC	University of Canberra

Executive summary

The Project

The Disability Standards for Education (DSE) were published in 2005 to clarify the obligations of Australian education providers under the Disability Discrimination Act (1992) which seeks to eliminate discrimination against people with disabilities. This includes accessing and participating in education.

The key object of the DSE is to establish processes and structures aimed at enabling students with disability to engage in education *on the same basis* as all other students. This means that a student or prospective student with disability is given opportunities and choices which are comparable to those for students without disabilities.

HEADS-UP (**H**igher **E**ducators **A**dvancing **D**isability **S**tandards – **U**niversities online **P**roject) is a consortium of agencies which has developed an e-learning resource for Australian universities to ensure they are aware of and meet their obligations under the DSE. The resource consists of a suite of eight interactive lessons which were evaluated for effectiveness at the University of Canberra and The Australian National University. The final product is freely available to all Australian universities.

Content Development

Initial content was developed by a content expert and an instructional designer. Storyboards were created and given to a group of virtual consultants who provided commentary on the content and the scenarios used to illustrate key points. An advisory group monitored and advised on progress on a monthly basis, and a reference group, on a six monthly basis. Three foundation lessons were trialled at the University of Canberra and The Australian National University. Using a pre-post training design, data were collected from trainees revealing positive changes in knowledge, attitudes and self-efficacy in relation to the DSE and students with disability.

Project Deliverable

The online training package is being made available to all Australian universities as a downloadable document. The package consists of lessons supplemented by instructions and recommendations as to optimal application.

The training consists of eight discrete, though related, lessons. The first three lessons provide an overview of disability, the DSE, and the implementation of adjustments. The final five lessons provide more in-depth information about each of the standards.

The master package is stored on a server as a set of downloadable SCORM compliant files which are compatible with all main learning management systems. The advantages of this mode of delivery include:

1. full customisability of content by each participant university;
2. capacity to embed training in each university's human resource systems;

3. capacity to update content to take into account any changes to the DSE or best practice; and
4. capacity to align training to the needs of different groups of staff of each university.

The training package can be found at trainwellonline.net/headsup. The site has details of the project, a range of resource materials, and the downloadable SCORM packages.

Content Validation and Evaluation

The content development utilised a variety of checking and evaluation procedures. These included the use of virtual consultants to validate content, survey questionnaires during the trials, use of testers to check for functionality, and regular reviews within the project team.

Project Evaluation

The project was subjected to two external independent evaluations. One evaluation considered the processes involved in the development, evaluation and dissemination of the training package. The second evaluation considered the content in order to ensure that this correctly reflected the intent of the DSE and was applicable to university staff.

Project Dissemination

All Australian universities were contacted through their respective disability support offices, to inform them of the project and release of the e-resources. The disability officers were also asked to identify key personnel (such as human resources; information technology) in their university who would be involved in implementing staff training and determining its status. Offers were made to share information electronically, through virtual meetings, or, in selected sites, through face to face meetings and presentation by project staff. Letters about the project have been drafted for key organisations (such as ATEND, Universities Australia) and three conference presentations in 2012 have been confirmed.

Recommendations

1. That the HEADS-UP online training package be adopted by Australian universities as core staff training in their strategy of meeting their obligations under the DDA/DSE.
2. That universities embed the training in human resource management to make the training more attractive to individual staff.
3. That universities use the customisation facility built into the package to make the wording and certain information more relevant to their particular context.
4. That universities provide staff who complete the online training with the opportunity to engage in follow-up face to face training or discussion with disability officers to further their understanding of the provision of the DSE.
5. That universities use the attached questionnaire to research the impact of the e-learning resource on their own university community.
6. That “as needs” support be provided to finance regular updates to the master package, in response to (for example) five yearly reviews of the DSE.

1. Acknowledgements

Graeme Innes AM

HEADS-UP wishes to acknowledge the key role of Mr Graeme Innes AM, Disability Discrimination Commissioner, Australian Human Rights Commission, who provided the inspiration to apply for funding for this e-resource, and whose staff have supported the project following its inception.

Reference Group

The HEADS-UP reference group reviewed project activities and give advice and feedback on emerging issues, trends and developments that could impact on the HEADS-UP outcomes.

The reference group consisted of individuals drawn from The University of Canberra, the Australia National University, and other higher education institutions. Their collective wisdom and insights is gratefully acknowledged. The reference group met face to face every six months along with the project team.

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Virtual Consultants

Virtual consultants were content experts who provided the project with many hours of thoughtful and detailed reviews of the storyboards and draft onscreen lessons which underpinned the information presented in the interactive training.

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Post Doctoral Fellow, Faculty of Education, University of Canberra. Jenny completed an evaluation on the processes and outcomes of the project.

Judy Hartley

Manager, Student Equity Services, Griffith University, Qld. Judy provided an evaluation of the appropriateness and validity of the content.

Additional Acknowledgments

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For participating in the trial of Lessons 1-3.

2. Tables and Figures

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3. Project Overview

Project Aims

This project addressed the Australian Learning and Teaching Council (ALTC, now Office for Learning and Training) Funding Priority Two:

Strategic approaches to learning and teaching that address the increasing diversity of the student body.

HEADS-UP aimed to promote inclusion and enhance the learning experience of students with disability at Australian universities. It accomplished this by producing a training package for all university staff which explains their obligations to students and prospective students with disability or health issues under the Disability Standards for Education (2005) (the DSE), which clarify part of the Disability Discrimination Act (1992).

The objects of the DSE are to:

1. eliminate discrimination against persons on the grounds of disability in the area of education and training;
2. ensure that persons with disabilities have the same rights to equality before the law in the area of education and training as the rest of the community; and
3. promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.

The training package was designed to meet a range of parameters in relation to content, usability and instructional functions. The parameters formed the foundation of review and feedback of the package during the development phases. The parameters are listed in Table 1, below.

Table 1: Parameters for training package design and strategies to meet them

Parameter	Strategy
The training product is made available to all Australian universities.	<p>→ Universities informed and reminded of the resource.</p> <p>The training package made available free of charge.</p> <p>The training package is disseminated in a format which allows universities to customise the package to individual settings.</p>
The training package is made available in a format which allows universities to embed the training easily in their existing systems.	<p>→ The package was designed so that it:</p> <ul style="list-style-type: none"> • Is downloadable as a SCORM package; • Is customisable by each university in relation to content and method of presentation; • Is able to be embedded in each university's learning management system; and • Is able to be embedded in each university's human resource systems.
Embodies “best practice” in terms of intent and application of the principles and procedures of the DSE.	<p>→ The content was designed as a collaborative effort with a broad range of content experts and reviewed for correctness and meaningfulness.</p> <p>Development was evidence-based, incorporating trials at two universities.</p>
Produces transformative learning through its use of pedagogy.	<p>→ The learning is designed to teach a mix of principles and practices.</p> <p>Learners are exposed to a series of active problem oriented processes in order to embed their new knowledge.</p> <p>Learners are required to manipulate the new information and apply it to realistic scenarios.</p>
Exploits leading edge applications of accessible computer technology.	<p>→ Utilises leading edge interactive computer teaching applications which have been demonstrated to maximise the learning process.</p>
Maximises opportunities for sustainability.	<p>→ Each participating university can customise and revise the content in response to local needs, changing practices, and shared insights.</p> <p>By embedding training into human resource systems, training can be monitored and controlled at the local level.</p>

Project Rationale

Australian society has embraced diversity since the 1950s. Initially this was seen in linguistic diversity through encouraging migrants from non-English speaking backgrounds, followed by full citizenship of Australian indigenous communities, and currently, by an open migration policy of peoples of non-European backgrounds.

At the same time, and in parallel with other developed countries, Australia began to formulate policies and strategies to promote people with disability as full participants in the life of their community. These policies were underpinned by aspirations to improve social equity, and were created in recognition of the intellectual, economic and cultural assets that people with disability could bring to the broader community. The Disability Services Act (1986), through its Disability Standards, provided a framework for community support for people with disability to enable them to attain valued roles in the community. The Disability Discrimination Act (1992) (DDA) established a framework for eliminating unreasonable barriers which impeded people with disability to achieve those valued roles.

The DDA makes it against the law to discriminate against someone if they have a disability in the following areas of life:

(from http://www.humanrights.gov.au/disability_rights/dda_guide/areas/areas.html)

- *Employment.* For example, when someone is trying to get a job, equal pay or promotion.
- *Education.* For example, when enrolling in a school, TAFE, university or other colleges.
- *Access to premises* used by the public. For example, using libraries, places of worship, government offices, hospitals, restaurants, shops, or other premises used by the public.
- *Provision of goods, services and facilities.* For example, when a person wants goods or services from shops, pubs and places of entertainment, cafes, video shops, banks, lawyers, government departments, doctors, hospitals and so on.
- *Accommodation.* For example, when renting or trying to rent a room in a boarding house, a flat, unit or house.
- *Buying land.* For example, buying a house, a place for a group of people, or drop-in centre.



The project logo emphasises the need to look up and forward when supporting students with

- *Activities of clubs and associations.* For example, wanting to enter or join a registered club, (such as a sports club, RSL or fitness centre), or when a person is already a member.
- *Sport.* For example, when wanting to play, or playing a sport.
- *Administration of Commonwealth Government laws and programs.* For example, when seeking information on government entitlements, trying to access government programs, wanting to use voting facilities.

The Disability Standards for Education (2005) (DSE) set out the obligations that educational providers must meet, and actions they must take, in order to comply with the DDA. Education providers, in relation to the DSE, include

1. an educational authority; or
2. an educational institution; or
3. an organisation whose purpose is to develop or accredit curricula training courses used by other education providers.

HEADS-UP limits itself to the application of the DSE to university settings only.

Legally, universities must comply with the Disability Discrimination Act, as operationalised by the Disability Standards for Education. A major strategy in achieving institutional compliance is for staff to be aware of their rights and obligations. The Guidance Notes of the DSE recommend that:

Staff induction and professional development programmes include components on disability awareness and rights and on the obligations of education and training providers under the Standards. Such programmes should enable staff to provide assistance that is helpful, for example during enrolment, without being patronising in language, attitude or action....Timely, relevant and ongoing professional development [should be] provided to staff (DEST, 2006, p 8).

Universities and consortia have provided some excellent guidelines and resource materials (see, for example, the *AVCC Guidelines relating to students with a disability*; 2006; and the *Australian Disability Clearinghouse on Education and Training*). Nevertheless, disability training is currently not well coordinated in Australian universities, which results in duplication of resources. The ideal solution is the creation of an e-learning resource, developed in consultation with the sector, which explains the Standards in a non-partisan way (that is, it is applicable to trainees irrespective of their particular university or state/territory). Making the online training package freely available to the higher education sector enables a more efficient, consistent approach, whilst freeing up resources to address local disability and equity issues.

Project Purpose

The main purpose of this project is to give Australian universities an additional tool for informing their staff of the obligations of Australian universities under the DSE.

Current Staff Resources

It is evident that most Australian universities have taken major steps in establishing support mechanisms to assist staff working with students with disability. All universities have dedicated disability advisors to support other staff and students. All universities have links to these supports and, often, links to additional material on their own websites for staff to refer to for initial advice. In addition, a number of universities have information on their website which is more comprehensive and which is likely to be effective for those seeking “just in time” advice.

Further, repositories of useful information about the needs of students with disability sit in other easily accessible locations. The Australian Human Rights Commission itself has a range of useful information, both about the DDA and DSE, and also about responding to the needs of students with disability (see <http://www.hreoc.gov.au/about/index.html>)

Professional Resources

A comprehensive collection of materials can be found at Australian Disability Clearinghouse on Education and Training (ADCET) (<http://www.adcet.edu.au/>). The ADCET site contains an enormous amount of information about the legislative obligations of education providers (including a specific site for universities). It also has a most comprehensive collection of guides, pedagogic advice and clinical information for staff. It contains information about disability types, academic considerations, and non-academic support considerations. Due to its size, however, it is not likely to be useful as a point of first reference, nor able to be used as a basis for point of entry training into the needs of students with disability.

An online site with equally broad and deep range of information is the Creating Accessible Teaching & Support (CATS) site (www.adcet.edu.au/Cats/). As with ADCET, it provides an extensive range of information about disability and responding to students with disability in the tertiary sector. It provides detailed guides for designing materials and presentations in ways as to enable accessibility by students with disability.

A number of professional level mutual support networks exist for staff of universities and related disability support personnel. Examples of these include:

NDCO – Network of National Disability Coordination Officers;

ATEND - Australian Tertiary Education Network on Disability;

DEAN – Disability Education Association of NSW / ACT;

DANCR – Disability Adviser Network of the Canberra Region and a number of other state networks;

ANZSSA – Australia and New Zealand Student Services Association;

EPHEA – Equity Practitioners in Higher Education Australasia;

AATUG – Australasian Adapted Technology User Group; and

ANSWD – Australasian Network of Students with Disability.

As well as the above, a number of electronic mail lists exist for quick dissemination and consultation. These include:

Austed – the listserv of ATEND; and

EdEquity – the listserv of EPHEA.

The contribution of HEADS-UP Training Package

The HEADS-UP interactive online training pack seeks to fill the gap between entry level guides to staff and professional level understanding and advanced technical knowledge. The HEADS-UP training resource seeks to achieve the following:

- It complements the above resources in assisting universities to meet their obligations under the DDA.
- It is designed in such a way as to be appropriate for ongoing Professional Development and/or be part of a staff induction suite of packages.
- It informs the trainees about the broad conceptual issues in disability, particularly in relation to students with disability at university levels.
- It gives an overview of the processes and range of responses required by the DSE when working with students with disability to the level where most staff will be capable of responding to students with disability independently.
- It presents the training through a medium which is effective and engaging pedagogically.
- It is appropriate to the full range of staff at universities, including teaching, learning support, and general staff. It is also relevant to staff of ancillary services such as sport centres, recreational and food outlets and other facilities.
- It is able to be adapted by each university to its own needs and structures.

The HEADS-UP Training does **not** constitute legal advice to staff or universities.

Where necessary, staff are urged to consult their Disability Office or University Legal Office.

4. Project Team Structure

In recognition that the topic of this project is open to a range of personal and professional interpretations across more than 30 Australian universities, as well as potential legal impacts on those using the training as a guide, it was decided to establish a project structure which enabled a system of internal checks and balances.

Five functional groups were set up to do the actual design of the training package and to offer both strategic advice and corrective feedback. The diagram below details group memberships, functions and relationships.

The HEADS-UP Consortium

A consortium meeting was held early in the project timeline. The consortium meeting was a meeting between the advisory group and representatives from each of the consortium members. The purpose of the meeting was to make clear the intent of the project and approve the timelines and budgets. The principal functions of this group were then ceded to the reference group.

HEADS-UP Advisory Group

The advisory group met on a monthly basis to review work to date and offer technical and strategic advice to the implementation team. The advisory group members reflected the key project and expert personnel from the University of Canberra and The Australian National University. The advisory group met on some 22 occasions and all meetings were minuted and task lists developed.

HEADS-UP Implementation Team

The implementation team was the small group tasked to develop the content and the training package. It was led by the project leader and additionally provided secretarial support to the other groups.

Initially, the implementation team was coordinated by a project manager, but it was decided that after the initial establishment phase, this position was not required and the funds were redirected to content development.

HEADS UP Reference Group

The reference group consisted of experts from a variety of backgrounds (see *Acknowledgments*, above). The reference group met at six monthly intervals (on three occasions after the initial consortium meeting) and provided strategic advice on content development, dissemination and issues of governance. The terms of reference for the reference group were as follows:

ALTC Grant Project: DSE Online Training Program

Reference group

The project group for the DSE online training program project wishes to establish a small reference group to provide high level guidance in the development of the program. Below are the proposed terms of reference for the reference group.

Terms of Reference

The reference group will consist of members appointed by the project group team leader. The members of the reference group will be selected on the basis of their knowledge and expertise in the area of the *Disability Standards for Education 2005* and/or other areas relevant to the project. The reference group will meet twice yearly for the duration of the project. The key responsibilities of the reference group will be to:

1. Review the project activities twice yearly and provide any relevant feedback and advice to assist in ensuring that the project activities are consistent with the requirements of the grant.
2. Review the project timeline and budget twice yearly and provide feedback and advice to assist in ensuring that the project is delivered in a timely fashion and on budget.
3. Advise on emerging issues, trends and developments that may affect the project outcomes.
4. Provide advice on how to ensure that relevant stakeholder groups are appropriately engaged to ensure high quality project outcomes.
5. Provide advice and feedback to assist in the national implementation of the project.
6. Provide additional selective inputs at the invitation of the project team leader.

Membership

Members of the reference group will be drawn from the University of Canberra, The Australian National University and other higher education institutions and/or relevant institutions/organisations and will include:

1. A member with information technology expertise;
2. A higher education staff member with e-learning expertise;
3. A higher education staff member who will be an “end-user”;
4. A higher education student with a disability;
5. A higher education staff member with expertise in pedagogy; and
6. A Canberra Institute of Technology staff member

Other members may be co-opted onto the reference group by the project team leader based on their relevant expertise.

HEAD-UP Virtual Consultants

The virtual consultants were a team of experts who support students with disability in universities (see *Acknowledgments*, above). All virtual consultants were invited to one face to face meeting to be introduced the implementation and advisory members, and to begin the process of reviewing content. After that, the virtual consultants were sent copies of storyboards for forthcoming lessons for feedback. In addition, they were asked to preview completed lessons to comment on content. The terms of reference for the virtual consultants were:

TERMS OF REFERENCE

The project group for HEADS-UP wishes to establish a small group of virtual consultants to provide a high level of guidance in the development of prototype HEADS-UP online training materials for Australian universities in the Australian *Disability Standards for Education* (DSE) 2005. Below are the terms of reference for the virtual consultants.

Terms of Reference

The virtual consultants will consist of members appointed by the project group team leader. Virtual consultants will be selected on the basis of their knowledge and expertise in the area of the *Disability Standards for Education 2005* and/or other areas relevant to the project. The virtual consultants will meet twice in Canberra between Feb 2011 and Jun 2011. During this period, virtual consultants will be sent 8 electronic training (e-training) packages for review and comment. Each training package will be 10-16 slides long.

The key responsibilities of the virtual consultants are to:

1. Review HEADS-UP prototype e-training packages as they are developed.
2. Provide feedback on process-based / technological user issues in e-training packages.
3. Provide feedback on the content of e-training packages.
4. Provide feedback on the development of pre/post e-training questionnaires.
5. Provide additional selective inputs at the invitation of the project team leader.

Membership

Members of the virtual consultants will be drawn from Tertiary Institutions in all Australian states and territories. Existing project members based at the University of Canberra and The Australian National University will represent the Australian Capital Territory.

Figure 1, below, shows the key components of the HEADS-UP team structure and the relationships between them.

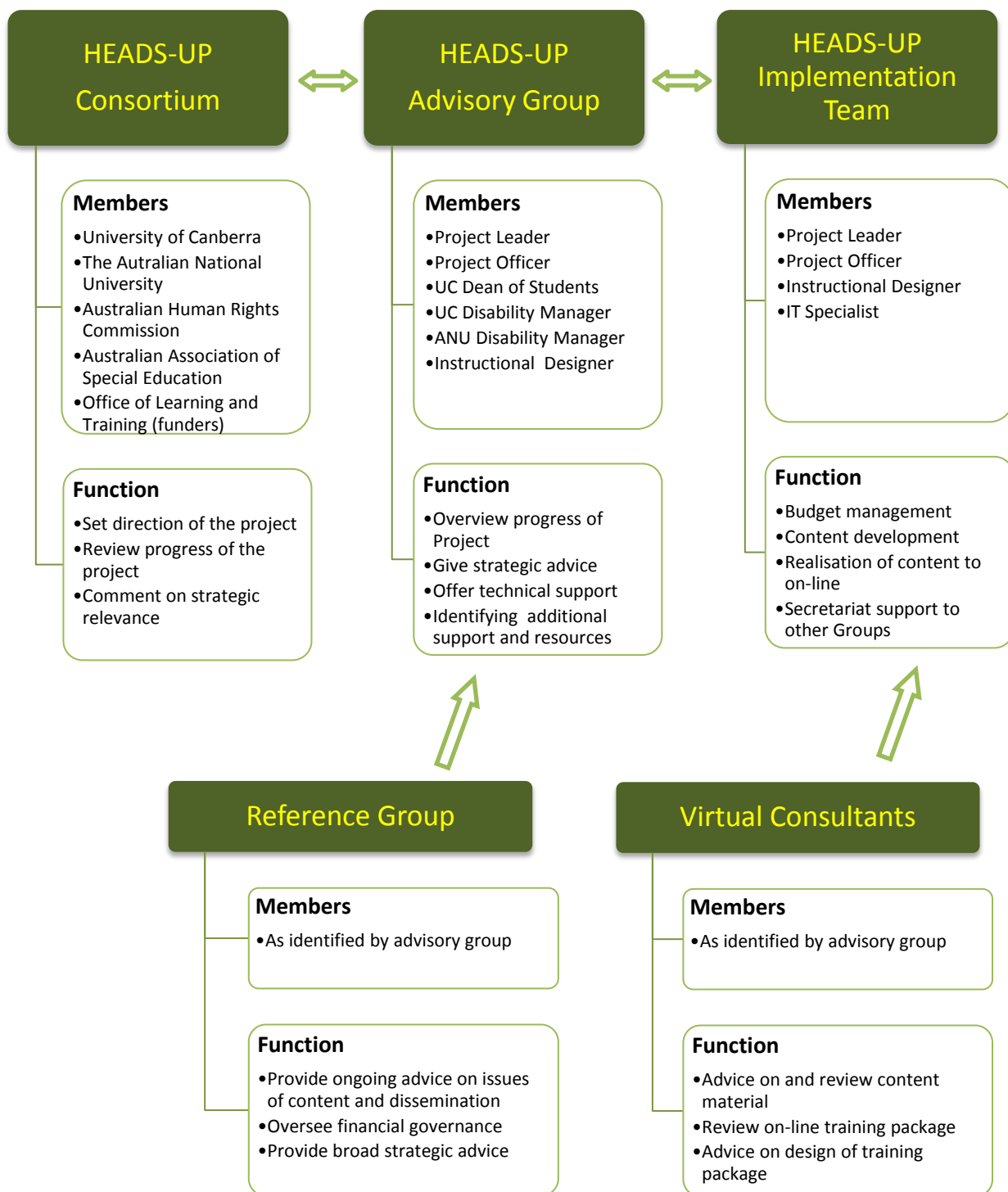


Figure 1
Project Team Structure and Components

5. Content Structure

Curriculum

The HEADS-UP training package consists of eight stand-alone lessons. Universities using the package can decide which lessons are most suited to their needs and priorities, and they can allocate different lessons to different staff (see *Provision for Customisation*, page 29). The lessons can be offered at one time, or can be spread over a longer period of staff members' employment.

The first three lessons deal with broad concepts relevant to compliance with the Standards. The last five lessons deal with each set of Standards individually, and build on the concepts first introduced in Lessons 1 to 3. The full list of lessons is:

Table 2: Content of lessons in HEADS-UP training

Lesson	Title	Coverage
1	Introduction to Disability	The definitions, descriptions and impacts of disability and medical conditions covered in the DSE and relevant to university settings.
2	Overview of the DSE	The purpose and implementation of the obligations required under the DSE in the university context.
3	Reasonable Adjustment	An overview of the meaning and process of deciding on reasonable adjustment for students with disability. This lesson shows the process of consulting with the student and engaging in a collaborative process with the student.
4	Standards for Enrolment	Obligations in relation to information to prospective students and enrolment processes.
5	Standards for Participation	Obligations in relation to enabling students with disability to engage in study on the same basis as other students.
6	Standards for Curriculum Development, Accreditation and Delivery	Obligations in relation to teaching and assessment. This lesson also discusses the concept of universal design.
7	Standards for Student Support Services	Obligations in relation to provision and accessibility to general student support services as well as specialist services.
8	Standards for Harassment and Victimisation	Obligations in relation to identifying and responding to unfavourable treatment of students with disability.

Additional Downloadable Material

Introductory Video

This lesson is an animated video explaining the main features and functional parts of each lesson screen as a form of introduction to those unused to navigating through interactive screens. Figure 2, below, shows snips from the introductory video.

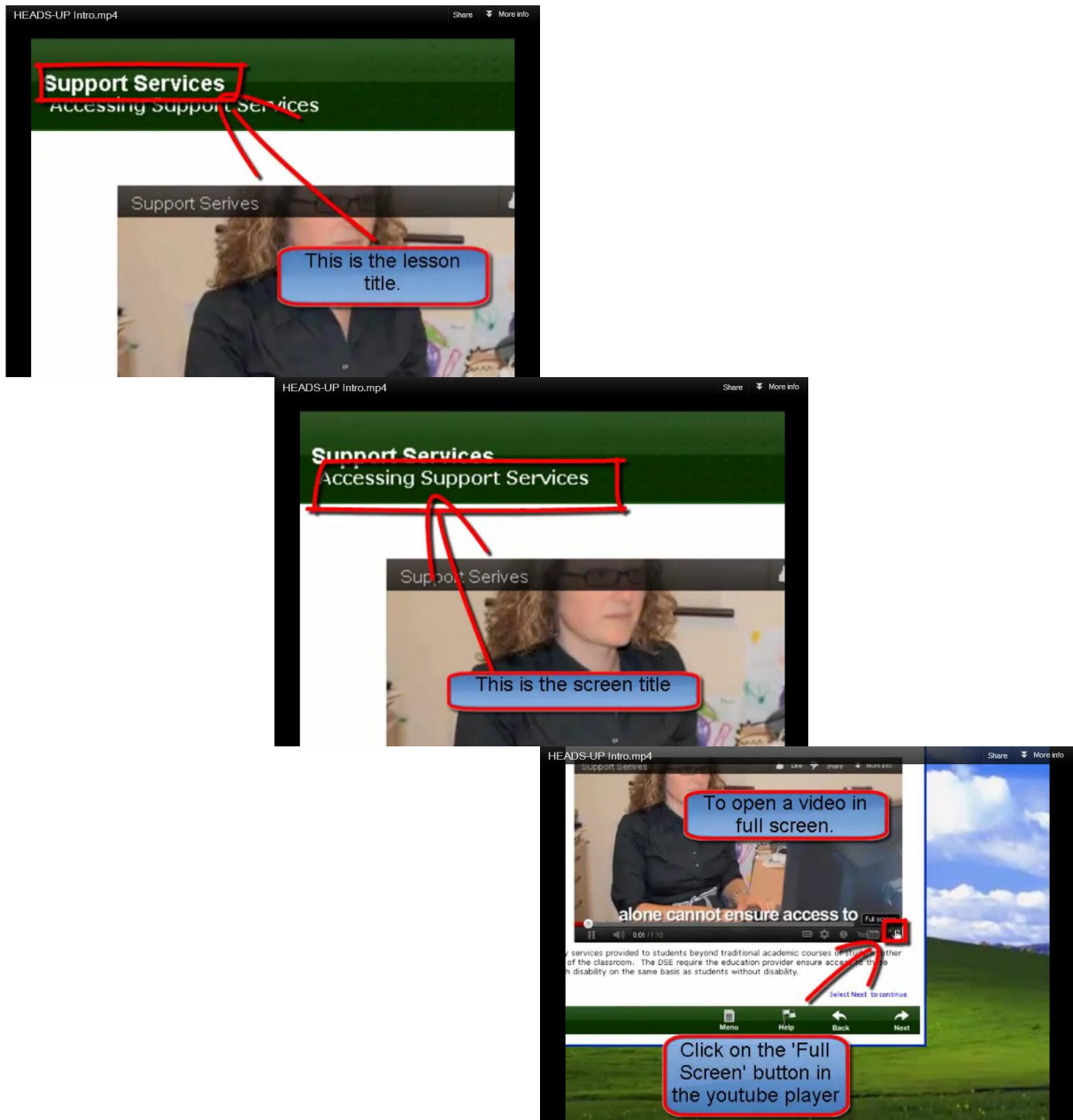


Figure 2

Video snips from introductory video to help learners navigate around the lesson screens

Tools for Internal Evaluation and Research

Universities have the option of downloading the pre and post training questionnaires as well as the lesson surveys which were used by the HEADS-UP team during the development trials to test for effectiveness. The questionnaires contained items which:

- tested the learners' attitudes to students with disability, and the participation of students with disability at university;
- sought to gauge the learners' actions when asked to make adjustments to students with disability before training, and their intended actions after the training; and
- sought to identify future needs of staff in relation to their work with students with disability.

The questionnaires and survey can be found in Appendices A – C. It is recommended that universities consider using these tools to investigate the impact of training at their university, and to conduct ongoing needs analyses of staff in relation to implementation of the DSE.

Scenarios

Scenarios are used extensively to illustrate points made in the body of the main texts. Scenario based training was chosen due to its demonstrated efficacy in promoting learning which involves the transfer of theoretical knowledge to situations that trainees might experience. An attempt was made to design scenarios to reflect as many disability types, as well as many issues, as was possible. Figure 3 shows a screen shot of one of the scenarios.

The scenarios were intentionally designed in some instances to be clear and relatively straightforward. In other instances, they were made more subtle and require the learner to view them as a problem solving exercise rather than information sharing. In these instances, information is shared as feedback to the exercise. Table 3 overleaf is a full listing of the disability and the issue or concept conveyed by scenarios in Lessons 1 to 8.



Figure 3
Screen shot of scenario: "Meet Jenny"

Table 3: Disability type and DSE issue raised in the scenarios across lessons

Lesson	Disability type	Illustrated issue or concept
1 Concept and definition of disability	Cerebral palsy	Class attendance problems
	ADHD	Learning difficulty
	Asperger syndrome	Social inclusion
	Mental health	Attendance difficulties
	Temporary physical injuries	Attendance and doing work
	Blindness	Equipment, formats
	Anxiety	Alternative assessment
2 Provisions of the DSE	Mental illness	Participation in study
	ADD	Assessment methods
	Wheelchair user	Misuse of disability to seek adjustment
	Visual impairment	File formats incompatible
	General	Universal design
	Visual	Equipment made available
	General	Universal design
	Physical	Room re-design
General	Support service improvement	
3 Making adjustments	Visual impairment	Consultation; accessibility; assessment
	Dyslexia	Assessment adjustments; extensions
	Stutter	Consultation; alternative assessment
4 Enrolment and information	Hearing impairment	Signing interpreter; alternative enrolment
	Depression	Alternative enrolment
	PTSD	Alternate information
5 Participation	General	Appropriate facilities
	Hearing	Need to respond; interpreter
	Mobility	Alternative activity; Change venue
	Visual impairment	Need to respond
	Social anxiety	Need to respond
6 Curriculum, accreditation, & delivery	ADHD	Audio recording of lesson
	Reading difficulty	Use of coloured paper for printing
	Exam anxiety	Time extension; Deny verbal assessment
7 Support services	Visual	Library has problem with database
	Physical	Assistance (cafe); Universal design
	Language disorder	Specialist service
8 Harassment & victimisation	Information processing	Advocacy by staff
	Reading difficulty	Consultation
	Physical	Room design/ devalued furnishing
	Mental health	Denial of service

To make training more effective, photos and videos were used to illustrate some scenarios. HEADS-UP was aware of ethical issues in using people with disability to demonstrate disability. The project, therefore, made it explicit to actors and learners that all individuals in the photos and videos were actors portraying certain roles, irrespective of whether they actually had a disability or not.

Attempts were made to ensure that the case studies and illustrations were representative of Australia's diverse culture. Scenarios included portrayals of both students and staff from different cultural backgrounds and ethnicities, of different ages, different genders, and with no single group situated in positions of either undue influence or powerlessness. Virtual consultants and field testers were asked to comment on the scenarios. Feedback was incorporated in changes to some of the early drafts to diminish as far as possible any perception that the scenarios were promoting a negative or devaluing portrayal.

Provision for customisation

Customisation of content

As described above, the final training product is downloadable as a series of SCORM packages by those universities wishing to use them. (SCORM is explained more fully in Chapter 8: Technical Information.) This mode of delivery enables the provision for a high degree of customisation by the receiving university. The skills required for customisation of content require some technical knowledge, but of a level generally common in all ICT departments of universities.

Suggested customisation of content may include the following actions:

- The HEADS-UP package necessarily uses a number of generic terms, for example "Disability Office" and "disability officer". Many universities use local terms for these, and the generic terms can be changed. Equally, locations and phone numbers of these services can be added.
- Universities can choose to add their own logos and other information to the lessons.
- Certificates can be also customised to reflect the university branding.
- The Disability Standards themselves are open to interpretation, and it is possible that the interpretation of the HEADS-UP team will not always be aligned with the decisions or processes of each university. Such items or information can be altered or added by each university.

HEADS-UP has provided templates and advice to assist universities to customise the product.

Embedding in university systems

It is recommended that universities download the SCORM packages and embed them in their own systems. Customisation extends to the capacity to embed them in different

learning management systems (e.g. Moodle, Blackboard) and other university databases.

Suggested customisations include actions such as the following.

- Embedding the training in staff support systems, or human resources systems. For example, the training could be considered as part of a professional development review process, or it could be incorporated into the induction of new staff.
- Making the training compulsory and creating a link between the graded questions in the lessons and individual staff employment records to track training completion.
- Making the training optional, but recognising the training for the purpose of meeting professional development requirements or lending weight to promotion applications using the printed certificate as evidence.
- Deciding which categories of staff are required to undertake the training, and which staff will be required to complete which sessions. For example, the following sequence of training may be deemed suitable:
 - academic staff with teaching responsibilities may be required to complete the first three general lessons and the lessons covering participation, curriculum development, student support services and harassment;
 - staff of student administration may be required to complete the three general lessons and lessons covering enrolment, student support services and harassment; and
 - general staff may be required to do the first three general lessons only.
- Deciding on the pace of the training, such as
 - requiring all lessons be completed within three months of beginning employment; and
 - requiring the three general lessons are completed within three months and the specialist lessons are undertaken in the second year of employment.

Pedagogic Rationale

The online, interactive mode of training was chosen for its ability to be cost efficient in terms of dissemination across the university sector, and for its efficiency in implementation at universities.

Apart from issues of time and resource efficiencies there is emerging evidence that online tools in professional development of teachers of students with disabilities (at least in primary and secondary school settings) has certain pedagogic advantages over more traditional training, and certainly advantages over no training (Lang & Fox, 2004; Payne & Poot, 2008; Schumaker, Fisher & Walsh, 2010).

The project makes strategic use of cutting-edge computer technology which assists interactivity, enhances engagement, facilitates communication and collaboration, and caters for a variety of learning preferences. It allows participants to take more control of their own

learning, and it enables training implementers to provide scaffolding and identify those “at risk” (Cavallari, n.d.).

To achieve these outcomes the technological features of the training program include the use of online multimedia modules for general and academic staff, presented as an engaging, interactive and user-friendly website.

Pedagogically sound principles are incorporated, such as distributed practice, opportunities for feedback, revision and reflection, scaffolding of content and process, flexibility, participant choice, and multi-modal learning (Beetham & Sharpe, 2007). Opportunities to teach by example were incorporated through adhering to the Web Content Accessibility Guidelines and the four overarching principles (that content is perceivable, operable, understandable, and robust).

To maximise learner engagement, the team recognised and responded to different learning styles through a variety of features such as:

- multi-media formats in content presentation and participant responses;
- embedded textual links to connect texts, pictures, explanatory segments, diagrams, data and audio-visual clips to highlight important concepts;
- interactivity using features such as self correcting quizzes, and choice of content;
- exploration of a series of authentic case studies;
- knowledge acquisition of facts, terminology and concepts about the DSE;
- links to national and international resources, further reading and useful websites;
- self-monitoring of learning via pre and post tests
- self paced learning modules with optional voice over; and
- 24 hour access, to promote participant choice and flexibility.

Review of the Literature of DSE Implementation at Tertiary Level

Published literature about the application of the DSE in the Australian university sector is scarce. Our literature search in this area produced few results, most of which dealt with the legal basis of requiring education providers to respond, or with the social equity issues supporting the moral rationale for supporting students with disability. Fewer papers dealt with examples of how to apply certain aspects of the DSE. Nevertheless, some insights can be gleaned from a small number of pertinent sources, particularly in relation to two issues. The first of these adheres around the relationship between adjustments and universal design on the one hand, and academic standards and inherent requirements on the other. The second body of literature focuses more on the outcomes of training, and the sequelae of non-training, for students and staff.

A number of authors raise the issue of academic standards. Brink (2009) examines the broader agenda of equality in higher education for a diversity of students and reflects on the fears held by universities about a potential drop in standards. He argues that this concern comes about from the confusion between entry standards (which have to do with educational attainments prior to entry into higher education) and exit standards (which are a measure of educational attainment in higher education). He argues that the relationship between the two is not fixed and that changing entry and delivery requirements to enable a broader range of students to participate in higher education need not lead to a lowering of exit standards.

Gosden and Hampton (2001) and Hampton and Gosden (2004) also argue that concerns about adjustments for students with disability are due to a confusion between academic standards (which are aimed at separating students who have learned deeply from those who have not learned the content), with discrimination issues (which act against a class of people). As the authors explain, anti discrimination legislation does not seek to protect the bad student specifically. Anti discrimination legislation supports all students who experience barriers to participation on the same basis as other students. Ideally, they assert, universities would help students with disabilities towards independence, and reduce the need for time-consuming individualised accommodations if they used better educational design in the first place. Universal design for learning consists of designing courses from the outset to benefit a broad range of learners, including those with disability. This approach becomes even more powerful when students are supported to learn alternative generic skills and technologies.

The call for universal design continues with Pardey, Baker, Lofts, Fitzpatrick, Copeland, Bell and Toole (2008) who demonstrate the application of universal design at agency level. Their work is complemented by Ashman (2010) who discusses the use of universal design in individual course delivery. In addition, White (2011) urges student services to become more proactive and spread the advantages of universal design amongst university staff.

Echoing the concern for academic standards, a new series of publications from the University of Western Sydney (UWS) have tackled the issue of identifying inherent requirements in relation to course design. In the words of UWS (2011):

“Inherent requirements are the fundamental parts of a course or unit that must be met by all students ... Students with disability or chronic health condition can have adjustments made to enable them to meet these requirements. ... However any adjustments must not fundamentally change the nature of the Inherent Requirement”.

Many practitioners find inherent requirements a vexed issue, and UWS has given the sector a template to guide this process for others.

Taken together, the literature strongly points to the need for clarification about “being equal” versus “being fair”, and the need for staff training about how adjustments can be made without compromising academic integrity.

A second body of literature considers the student experience. Cumming and Dickson (2007) review case law underpinning the status of the provisions in the DSE and find that although case law supports the relevance of the DSE, in practice the onus is still predominately on the student with disability to prove discrimination. The authors add, nevertheless, that although courts appear reluctant to engage in commentary on educational policy, they are prepared to uphold the policy intent and implications of the various anti-discrimination legislations in Australia. Put another way, courts require education providers to adhere and apply the relevant legislations. The strong implication is that providers must be educated in their responsibilities so the burden of proof does not lie with the student.

Ryan (2007) interviewed a small sample of students with learning disabilities in an Australian university and found that the students generally felt misunderstood and under supported in relation to their previous experience at school. Along with Cumming and Dickson, this reinforces the conclusion that training in the DSE is required in higher education.

As mentioned earlier, most of the Australian studies have focused on legal or equity issues rather than examining the outcomes of disability training for the participants themselves. An exception to this general trend is a large study conducted in the United Kingdom which found that staff of universities are generally positive in relation to the rights of students with disability to access higher education, but staff members also showed some concerns about the impact of this group of students on their classroom practice (Smith, 2010).

Drawing together the main points from the literature review, it can be concluded that staff are unsure about the impact of accommodations on academic standards and they would benefit from seeing examples of universal design and other illustrations of how the DSE may be applied. Furthermore, students express the need for more support.

In summary, it can be concluded that there is a strong case for providing training to university staff in the DSE. The HEADS-UP team have responded to this imperative. Figure 4 (below) below depicts an excerpt from the e-resource, illustrating how we have attempted to meet this challenge for staff training in the DSE. The following chapter describes how the content was developed.



Prior to the meeting, you emailed the Disability Officer to discuss Jenny's needs. He made several recommendations on how to help her including:

- Change the file format of the readings into something that Jenny can use on her e-reader.
- Provide sufficient alternate or descriptive text in the images so that she can answer the questions in the activity.
- Create a new activity so that Jenny can achieve the same learning outcomes.

As you consult with Jenny, you should identify what adjustments must be made, whether they are reasonable, the extent to which the adjustments achieve Jenny's full participation, and the extent to which other adjustments may be less disruptive. Remember, the DSE is most concerned with Jenny's full participation on the same basis as other students who do not have a disability.

In many cases, the University Disability Officer may provide you with recommendations prior to a student's arrival in your class. In this case, you would meet with the student to discuss as soon as possible.



Consulting with Jenny (Lesson 3)

To replay the video, select the Play button.

Select Next to continue.



Figure 4
Screenshot showing an example of student consultation

6. Content Development

Virtual Consultants

A group of people with expertise in the application of the DSE or in staff professional development was invited to be content consultants. An attempt was made to obtain input from practitioners from as broad a geographic representation as possible.

The virtual consultants can be found in the Acknowledgement section (page 6). Each brought particular expertise to the project. For example, it may be noted that one consultant is based in the United Kingdom. This occurred because he moved to the UK soon after agreeing to be a virtual consultant for HEADS-UP, and the project considered his broader perspective (and his vast Australian experience) would provide an alternative viewpoint. Another consultant of interest was a senior manager in human resources at a university, who focussed on the issues of relevance and suitability of the package in relation to embedding the training in organisational professional development systems. A third consultant had particular expertise in the inherent requirements of academic courses.

Each consultant was sent 149 pages of storyboards to read and comment upon, as well as being a tester of the draft online lessons.

All consultants were invited to one face to face meeting at the University of Canberra as first point of contact, where the purpose and process of the project were outlined. Most consultants took the opportunity offered.

Each consultant then took part in reviewing one of the first two lessons as a “think aloud” activity. In this activity, each consultant worked through one of the lessons on screen in the presence of a project worker. The consultants were asked to engage in a self talk process in which they verbalised their thoughts and reflexive reactions to the material. The worker took note of their statements as spontaneous feedback, which then comprised feedback for lesson refinement.

After the first meeting, each consultant became a virtual consultant, in that storyboards and draft online lessons were made available electronically and feedback was requested. Reactions and feedback were sought for the content, style and functionality (ease of use, technical issues, and so on). Feedback could be made either in narrative style or through the tools in the “review” facility in the Word documents.

Feedback responses were collated by the project officer, and alerts or recommended changes were sent to the instructional designer who refined the content to reflect the logic of the feedback.

Experience of collating the feedback showed that there was remarkably little overlap, let alone conflict, between the advice received from multiple consultants. Where more than one consultant offered a suggestion, chances were that their recommendations were congruent – suggesting that the application of the intent of the DSE in the field (at least

amongst university based disability officers) is consistent. More typical, though, was that each consultant focused on different aspects of the lesson content, presumably reflecting their own priorities and interests. Consequently, and to the advantage of the project, the draft lessons received a very diverse review.

It can be thus asserted that this process of using virtual consultants, though demanding of each consultant's own time resources as well as heavy on use of project resources, was invaluable in terms of achieving breadth, integrity and validity of feedback.

Learning Information Parameters

One of the early issues confronting the project team concerned the very basis for the training content. The virtual consultants alerted the project team that an attempt to educate all university staff in the technical side of the DSE was neither needed, appropriate, nor feasible. Some of the conceptual issues raised in the DSE (for example, inherent requirements, reasonableness of adjustments) were substantial in themselves. Attempting to educate all staff in the technical responses (for example, types of adjustments possible for different types of disability), had the potential to make this training unworkably large. Certainly, university administrators made it clear that the longer the training, the less likely it would be adopted by universities due to logistical and cost constraints.

An additional, positive, parameter for HEADS-UP is that all universities already have established effective support systems for students with disability through their equity or specialist disability support structures. When considering organisational responses to their DSE obligations it was feasible, therefore, to make the assumption that each university staff member had relatively easy access to a technical expert to consult about identifying and/or responding to the needs of students with disability.

The ongoing debate about these issues, with draft experimentations with different types and levels of information, led the project team to realise that DSE, at least as applied to universities, has scope for staff training which allowed for both *training* in a set, formulaic, procedure for responding to students with disability, as well as *education* in underlying concepts which enable staff to apply a problem solving approach to responding to students with disability in such a way as to emphasise adaptability to individual needs.

The formulaic components

Some obligations in the DSE have set formulas or are "must do". For example, when a student presents themselves to a tutor and informs the tutor they have a disability or a medical condition which is affecting their work, the tutor must **consult** with the student and have a discussion with the student (or a nominated associate of the student) to identify the nature of the impact on their study. Following that, they need to **act** in accordance with the consultation, even if the response is informing them they will not make any changes.

The only other formulaic process referred to in the training is the prompt “when in doubt, consult with your student Disability Office for advice and guidance – but this does not absolve your responsibility under the DSE”.

The adaptive components

The rest of the DSE is not as prescriptive about the nature of responding. Rather than following a formula of action, the DSE assumes the student and the education provider (through university staff) engage in a process of discussion and problem solving until the education provider makes a decision about the action to pursue.

This adaptive, or problem-solving, approach is more difficult to present in a relatively brief training course. It would have required all staff to have deep knowledge of disability (types and impacts of all categories of disability and medical conditions), and be knowledgeable about all possible adjustments and technological aids applicable to different disability types.

HEADS-UP decided the best approach is to utilise scenario based learning in which learners use core information from the training to work through simulated problem-solving exercises which are based on a sample of disability types and real-life situations they may encounter.

The decision to use scenario based learning is consistent with feedback during the recent review of the DSE, where many people expressed the view that more examples of the Standards in action would assist their understanding of the underlying principles. It is also consistent with the findings of a survey of staff at the University of Canberra who undertook both online and face to face training. The survey participants considered both training modes were equally useful, but in different ways, with the face to face mode being particularly useful for the opportunity to bring up and discuss actual experiences.

Figure 5 below provides an example of the use of a scenario during an assessment activity in Lesson 7. As this figure indicates, components of the training are pertinent to non academic staff, not simply academic staff.

The cafeteria supervisor watches as the student orders. The supervisor understands that the DSE and the Disability Discrimination Act (DDA) both require that they make adjustments from the normal way of doing business to meet the needs of students with disability.

As the counter has posed difficulties for other students with disability, the supervisor wants to make some changes to better help students with disability.

What are some appropriate changes that can be made? (Select all that apply)

- Make it a policy to offer to deliver all orders to students who cannot reach the serving counter.
- Request that students who need assistance ordering food call in their order before arriving so that other students are not held up.
- Plan to remodel the counter to make it more accessible to students in wheelchairs.
- Meet with the disability services manager to discuss how to better accommodate the needs of students with disability.

Message from webpage



You are correct; these are all good options for the cafeteria manager to consider. Each of them help to ensure access to services for students with disability.

OK

Student who uses a wheelchair has a problem with the high counter at the cafeteria. The supervisor institutes universal design options. Graded scenario in Lesson 7, with feedback.

Help Back Next

Figure 5
Scenario-based assessment

7. Instructional Design

HEADS-UP uses the Guided Experiential Learning (GEL) approach for instructional design. GEL refers to a process for designing and developing training that places the individual learner into real life, mission-critical processes, concepts and tasks that directly relate to their job performance. GEL is concerned with teaching trainees the right way of doing something. It is a way of organising instructional content, and presenting information in job-related contexts. The following are key provisions of guided experiential learning in relation to this training.

Processes.

The Disability Standards for Education (2005) is a set of regulations that spell out the obligations of education providers. Taken together, the Standards represent a federally mandated process, with each section and standard being associated with particular courses of action. This interpretation of the DSE is reflected in the course structure, with each standard containing its own dedicated lesson.

Procedures.

While the DSE do not specifically dictate procedures that all education providers must follow, they nevertheless contain some implied procedures. For instance, the DSE clearly outline steps that all education providers must follow when making reasonable adjustments. When combined, these steps constitute a procedure. Although clear procedures help to simplify training, most procedures in relation to the Standards are created at the jurisdictional-level, and unlike DSE processes, are not federally mandated. Because HEADS-UP is designed for an Australian-wide audience, reference to procedures is minimal because these can change across jurisdictions.

Concepts/principles.

According to GEL, concepts/ principles are introduced and taught to trainees when needed for mastery of a process. Concepts relating to each process are introduced before they are required for mastery of the Standards. For instance, the concept of universal design is directly related to the process outlined in the standard for curriculum design, development and accreditation. In accordance with GEL, this concept is taught right before, or along with the teaching of the standard, and not somewhere else. That being said, certain concepts are taught before any process can begin to be mastered by the trainee. These concepts are taught first, and are tied to processes that the trainee will learn later in the training.

Scenarios.

Scenarios are the key mechanism for centring the training content into experiential learning. Scenarios relate to the concepts and processes being taught in a specific lesson. They are either short in nature (one or two paragraphs), or long (span most of a lesson). The scenarios show the training audience executing their roles. Scenarios are also used in the graded portion of each lesson (see "Practice and Assessments").

Interactivity.

Interactivity refers to the process where the trainee interrelates with the courseware. This may be through clicking on the screen, dragging items, navigating, or otherwise controlling their learning. Interactivity can promote immersion into the training and provide a multi-layered approach to the design. However, overuse of interactivity can also cause confusion and can lead to the trainee “getting lost”. Therefore, HEADS-UP uses a targeted approach to interactivity by using it to enhance learning, but not to make the training overly complex. This is an important consideration due to the touch screen functionality of tablet users, as mouse click interaction is more sensitive. All interactions are designed to be appropriate for tablet users. The courseware is designed for an overall interactivity level II to III (on a scale of I – IV).

Practice and Assessments

As described below, HEADS-UP contains both practice (non-graded activities) and graded assessments.

Part Practice.

In the guided experiential learning model, trainees are given the opportunity for part practice within a procedure or process. HEADS-UP part practice involves trainees making judgments at certain points within a scenario. In most cases this involves presenting the trainee with a concept/principle and a corresponding decision-point, and asking them to apply their knowledge to choose a potential outcome for the scenario. Trainees receive automatic feedback (See “Feedback” below) based upon their response. During the practice stage, they are asked to continue to make selections until they have selected the correct outcome.

Whole practice.

Whole practice occurs when the trainee is asked to make a set of decisions based upon an entire scenario. In HEADS-UP, whole practice involves trainees either looking back at a scenario and answering reflective questions, or being presented with a new scenario and being asked to make decisions without further instruction.

Graded Assessments.

Graded assessments are structured much like the practice activities, except that the trainee is given a limited number of responses. For complex concepts/principles, or processes/procedures, the trainee is given the opportunity to answer questions in the same manner as the part-practice activities. In less complex scenarios, the trainee is asked to answer questions in the same manner as the whole practice activities. Protocols are as follows:

- Each lesson requires a specific score for the trainee to successfully pass the training.
- All graded assessments have a score associated with each question, based upon the number of selections required to answer correctly (e.g. multiple-choice, single select will be one point, while a triple select will be three points).

- Using SCORM protocols, these scores are automatically sent to the LMS where they are recorded.
- Depending upon whether or not the trainee passes the lesson, they are directed to a screen informing them of their results. This screen serves as a summary for the entire lesson, and either congratulates the trainee, or suggests that they try the lesson again.

Feedback

Automatic feedback is provided to trainees upon submitting a practice or graded assessment. (See Figure 6 below.) This feedback indicates to the trainee why their response was correct or incorrect, and/or provides them with some assistance with making the correct selection.

Trainee progression

Trainees can progress through the course at their own pace. They can start and stop the training at any point, and return to the screen where they left off. This being said, in many cases it is important for the trainee to complete certain activities in a clearly defined sequence.

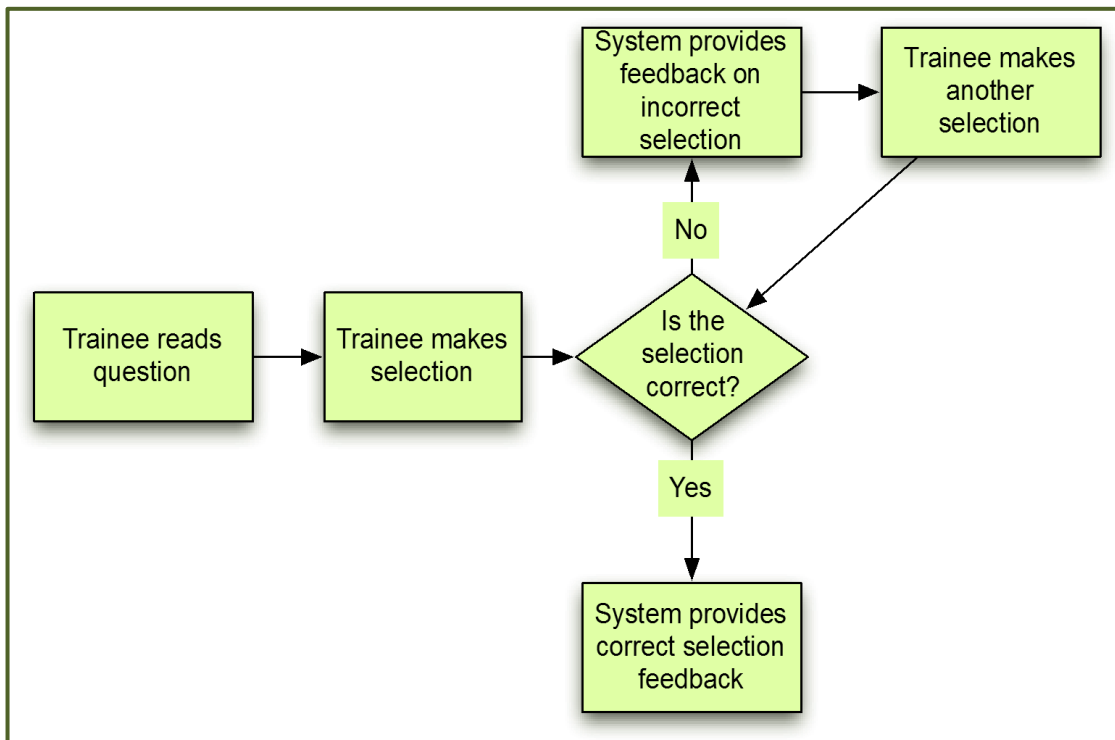


Figure 6
Feedback loop for practice activities

8. Technical Information

SCORM

HEADS-UP was built to conform to the Sharable Content Object Reference Model (SCORM). SCORM is a collection of standards and specifications for web-based e-learning. It defines communications between client side content and a host system called the run-time environment, which is commonly supported by a learning management system. Put simply, SCORM ensures that all e-learning content and learning management systems can work with each other, just like the DVD standards ensure all DVDs will play in all DVD players. SCORM also defines how content may be packaged into a transferable ZIP file called "Package Interchange Format".

HEADS-UP was built to SCORM 1.2 standards. Whilst SCORM 2004 is the most up-to-date version of SCORM, SCORM 1.2 is more universally accepted by learning management systems. SCORM Packages may be modified directly by editing its XML files, and source files.

Each lesson is provided as its own discrete SCORM package. This allows universities the most flexibility in determining the curriculum makeup for specific target audiences. For instance, one university may require a certain subset of trainees to take only the first three lessons, while other trainees may be required to take all lessons. If the lessons were exported as one package, this flexibility would be lost, or would require extensive modification.

Minimum system requirements

HEADS-UP was designed to be delivered over the Internet for use on desktop computers, and tablet computers via standard web browsers. HEADS-UP has been tested using: Internet Explorer Version 7 and above, Firefox, Chrome, and Safari. Since Internet Explorer 7 is readily available, Internet Explorer Version 6 and below is not supported. While any Internet connection will be able to run the courseware, it is designed to a minimum bandwidth for use on ADSL connections, and 3G wireless connections.

Multimedia

Multimedia refers to the media developed for HEADS-UP in various different formats. This includes, but is not limited to: video, audio, still images, text, and interactivity. Multimedia supports content and enhances learning, and is used strategically throughout the courseware. There is a mix of at least two different forms of multimedia on 90% of screens within the course. Examples of this mix are:

- text supported by a still image
- images used interactively to reveal text

- narration of a slideshow
- video with supporting text
- interactive questions with images

On many screens this multimedia mix includes more than two different types. In such cases, one form of multimedia does not distract from another. (For instance, narration does not play while different text is visible.)

Media Streaming

Media streaming refers to the process of playing multimedia (video, audio, animation, etc.) before the entire file has been downloaded. Streaming is an important feature for all e-learning as it prevents delays caused by downloading large files. Delay minimisation is achieved via a streaming service, or via a plug-in capable of simulating a streaming service.

Early in the project, Flash Video was used for media streaming. Its use proved unsustainable for several reasons. The first was that the University of Canberra did not have universal access to flash players on all computers, causing a serious issue in regards to the pilot. In addition, Flash is not supported on Apple iPads, the largest selling tablet computer in Australia. For both of these reasons, Flash was quickly abandoned, and the use of HTML-5 was strictly adhered to.

In place of Flash, the development team decided to use youtube.com for media streaming. They uploaded all narration and video files to youtube.com, and embedded them into the SCORM packages. There are a few limitations to this strategy which must be pointed out. First, by embedding youtube.com video, the development team is relying on youtube.com to continue to allow access to these videos in perpetuity. Second, the format in which these videos display (i.e. the youtube.com player skin) has and will continue to change, potentially leading to the courseware changing slightly in look and function over time.

Development Tools and Environment

Courseware Development Toolset.

The development team used CourseLab 2.4 for the development of the prototype lesson. CourseLab 2.4 is a free SCORM development tool available for download on the internet (www.courselab.com). While fully functional and SCORM compliant, the use of CourseLab caused problems with browser accessibility as well as Web Accessibility Standards. After the development of the prototype, Lectora Publisher was chosen as the primary tool.

Project website

The project website used for the trials and development stages was a Drupal-based content

management system. It was used for communication and as the gateway for access to the learning management system as well as other project documents.

A single sign-on was used between the project website and the LMS. Based upon the email address used by the registrants, a button appeared on the main page of the website taking them to the appropriate learning management system (see below). The website also provided a place for the development team to access student results, and survey responses via dedicated data extraction pages for each LMS instance.

Learning Management System (LMS)

The LMS was built on the open source Moodle LMS. Three different instances of the LMS were used: one for the University of Canberra pilot, one for The Australian National University pilot and one for testing and reviews by the development team, virtual consultants, and other stakeholders. Displays for the three LMS were comparable. For example the ungraded problem solving exercise in Figure 7 displayed similarly in each Moodle version

The screenshot shows a Moodle LMS interface for a course titled "Standards for Participation Paul's Plans". The main content area displays a matching exercise with the instruction: "Select the disability on the left with the corresponding adjustment on the right." The exercise is presented on a monitor screen. The table below shows the content of the exercise:

Disability	Adjustment
Hearing Impairment	All social activities at the event are optional. Invite participants to bring a friend, relative, or other guest.
Social anxiety	Provide large text or alternative format for written material
Visual Impairment	Only use venues that have ramps, and/or lifts.
Wheelchair access	Have a sign language interpreter available and/or provide captioning

Blue lines connect "Hearing Impairment" to "All social activities..." and "Wheelchair access" to "Have a sign language interpreter...". A feedback message box in the foreground says "Message from webpage: You are correct." with an "OK" button. A green callout box in the bottom right corner of the screenshot reads: "Ungraded, problem solving exercise. Lesson 5, with feedback".

Figure 7
Ungraded problem solving exercise

9. Product trialling

Ethics approval

Product trialling was conducted in the form of a research project within the University of Canberra and The Australian National University. The trial revolved around the first three draft lessons of the package, and incorporated a questionnaire taken before attempting the training, a brief questionnaire at the end of each lesson, and a questionnaire at the end of completion of training.

Under rules involving research, formal ethics approval was sought to conduct this trial at the University of Canberra. Ethics approval application was completed under the NEAF scheme (National Ethics Application Form). Receipt of approval at the University of Canberra enabled The Australian National University to expedite the approval process at the latter's campus.

As part of meeting the requirements of research, steps were taken to keep the training participants and the result of the training de-identified so as to protect participants from any unintended negative consequences resulting from participation or non-participation.

The requirement for anonymity and quarantining of identifying data from the researchers created the need for a multi-step training registration process which proved to be an irritating obstacle to a number of registrants. These obstacles were usually overcome through clarification via email or phone, but it is unknown how many potential participants were turned away by having to click their way through multiple steps before they could access the training.

Email requests for participants

Invitations to participate in the trial were made via email to staff at both the University of Canberra and The Australian National University. The main difference was that at the University of Canberra the mail out was to all staff through a centralised distribution list, but at The Australian National University the mail out was to selected groups within the university.

The project team noticed a curious pattern of response to these emails at the University of Canberra. Further investigation revealed that 54% of all registrations over the first month of the trial occurred within one working day of the announcement. The other 46% occurred on the 28 other days. By working day, is meant the 24 hour period after the broadcasting of the email. This held, in one instance, when the email was sent midday Friday. The surge occurred that Friday afternoon, and continued Monday morning till midday, mostly skipping the weekend. Figure 8 illustrates this pattern of responses.

A quick search of the published literature on the use of emails as notifications in research suggests that this mode of subject gathering seems to have interesting and unanticipated

impacts on participation (see, for example, Fan & Zheng, 2010; Greenlaw & Brown-Welty, 2009).

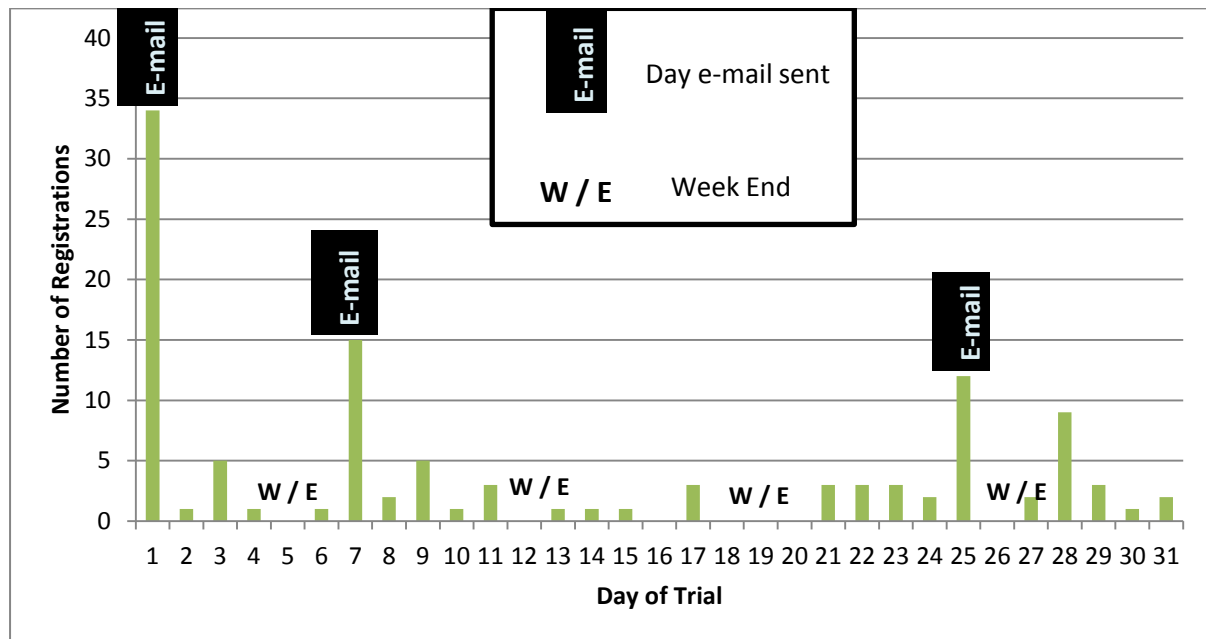


Figure 8
Registration rates for days of the first month of trial with spikes following e-mails

Internal Evaluation of Product

Trial participants were required to complete a survey before and after doing the training. The pre training questionnaire included items about the following broad areas of interest to the project team (see Appendix A):

- basic demographic information
- the participants’ beliefs about (attitudes to) students with disability at university, and
- the participants’ prior or intended behaviour (actions) in relation to students with disability.

The post training questionnaire (see Appendix B) comprised the same (or equivalent) items (other than demographic), but also added items about:

- the training package itself;
- any identified need or desire for additional training and in what format; and
- the length of time and number of sessions it took to complete the training.

In addition, there was a simple, five item questionnaire at the end of each of the three lessons asking about meaningfulness and relevance of the content (see Appendix C).

Effectiveness of online training

One measure of the short term effectiveness of the online training consisted of a questionnaire which trainees were asked to complete twice - immediately before and immediately after the training. A full analysis of the results is in preparation for publication, but a general summary can be presented here.

In brief, a series of t-test revealed the following changes after training was completed:

- Training participants felt they were more knowledgeable about what procedures to follow when approached by a student with disability.
- Training participants said they were more knowledgeable about where to find information at their University to help them work with students with disability.
- Training participants indicated they were more knowledgeable about when to contact the Disability Office.
- Data for training participants showed a highly significant increase in perceived confidence in relation to dealing effectively with students with disability.
- Training participants were less likely to agree that their processes were sufficiently flexible to adequately accommodate students with disability.
- Training participants said they were more likely to make it known to ANY student that they could discuss additional needs they might have.
- Training participants asserted they were more likely to spend extra time assisting a student with disability and finding the reasons for any difficulties.

A second measure consisted of individual feedback provided at the end of each lesson. In relation to the individual lessons, over 95% of trainees agreed or strongly agreed that they understood each of Lessons 1, 2 and 3, and a similar proportion agreed that the scenarios helped them to better understand the lesson. An average of over 80% of trainees agreed or strongly agreed that the lessons would be useful in their job.

Overall, the results strongly point to the effectiveness of the e-learning resource, and the value placed upon it by staff.

Comparison of online and face to face training

Since 2008, the University of Canberra has run a series of face to face training sessions for academic and administrative support staff. Staff were strongly encouraged to attend these sessions and the take up rate was high. In 2012 the University of Canberra ran both the HEADS-UP trial and the face to face training as a joint requirement. Specifically, all new staff were required to both complete the trial online training and to attend a 2-hour follow up face to face session. Staff who had previously received training were encouraged to do one or both of the training modes if they wished to refresh their knowledge. HEADS-UP took the face to face sessions as an opportunity to conduct a focus group and to survey participants in relation to the two modes of training.

Of those who completed both training modes (34), 97% found their initial online training was “very” or “mostly” effective, and 94% found the same for the follow-up face to face. More impressive was that 94% of respondents felt that doing both modes of training was more effective than either one alone. No participant volunteered that there was duplication doing the two formats.

Participants were asked which of the formats staff preferred (“liked”). This item was difficult to analyse, as most participants did not answer it or wrote that they liked doing both. However, for the few who did answer, slightly more preferred the face to face due to the opportunity to ask questions and to listen to discussions. At least two participants indicated they liked meeting the disability officers personally so that they would feel more comfortable if they needed to contact them more formally at a future time.

Those who preferred the online did so because of flexibility it afforded them to do this in a time most convenient to them. One participant commented that people do not take online training seriously.

One finding which is worthy of further consideration was that 88% of the respondents said they preferred having the online training before the face to face, presumably because the face to face allowed them to ask follow up questions. It was not possible to conclude whether this is a real effect or an artefact of the fact that they were required to do this sequence in the first place.

When comparing the two types of training, it should be noted that although they contained common material (such as an explanation of the objects of the Standards, and the definition of terms like “disability” and “reasonable adjustments”) the content in the two formats differed. The face to face format enabled participants to bring more of their own experiences into the discussion, whereas the onscreen lessons provided audio visual scenarios which became the focus of learning. Thus, reported preferences for the online or face to face training could be attributable to either their content or their format. The project came to two main conclusions about the issue of the face to face versus onscreen training:

1. Both online and face to face training were effective in training staff about the DSE.
2. Despite the common material, participants did not perceive them as redundant, but in fact saw them as very complementary and of equal benefit.

HEADS-UP recommends that universities use the online training as a springboard for engaging staff in face to face contact with disability officers. Staff appreciated the opportunity for question and answer sessions, and the opportunity to engage in an active exchange of ideas about issues in applying the DSE. It is noteworthy that this sentiment was equally expressed among general staff as academic staff. For example, one staff member in the University of Canberra’s IT department whose role included web design, was concerned about how he would ever get to know if his practices exclude students when he does not have direct contact with students.

10. Dissemination

Dissemination has been a driver of many of the decisions made throughout this project. It is recognised that people who contribute to a project are more likely to take ownership of it, and so the project team used every opportunity to encourage collaboration across the states and territories, and to advertise the creation of the learning resource from the outset. The virtual consultants, for example, not only provided valuable feedback on the draft storyboards and lessons, but through their various committees were in a position to inform their colleagues of the progress of the resource. Similarly, the reference group was able to publicise the resource.

Dissemination was designed to occur through both top-down and bottom-up processes. The Australian Human Rights Commissioner, Mr Graeme Innes AO, has agreed to mention the DSE e-learning resource at relevant higher education forums and speaking engagements. Having the Commission as part of the project team has lent authenticity to the final suite of 8 lessons which will aid in their distribution and uptake.

Within the Universities there are four major groups of people who will drive the adoption of the package, and each will be discussed in turn:

- Vice-Chancellors
- Human resources personnel
- Information and communication directors
- Disability directors

As the driver of policy and practice at their university, each Vice-Chancellor needs to know about the purpose, importance, content and credentials of the DSE resources. A letter has been drafted for all Australian Vice-Chancellors to receive when the package is released emphasising that the resource can help them discharge their training obligations under the DSE. In addition, Universities Australia is being asked to include information about the release of the resource in its fortnightly update.

A list of human resource directors in Australian universities is being compiled through the Australian Higher Education Industrial Association (AHEIA). Letters will be sent to these personnel, and the resource will be publicised in the AHEIA newsletter. Emphasising that the HEADS-UP lessons are freely available and will benefit all universities rather than just the University of Canberra and The Australian National University will broaden their appeal. Possibilities will be canvassed about ways that human resources policy can embed the resource in current practices. For example, using a “carrot and stick” approach, it is possible to require that new staff undertake the training during induction sessions, and that training be mandated for other staff as part of ongoing professional development. Alternatively, staff can be rewarded for completing optional DSE training if this is included as one of the criteria for professional development review or promotion.

All Australian universities have been contacted with a request for a list of ICT personnel who

would need to know about the project. The master set of lessons, complete with SCORM and source files is held at www.dsetraining.org.au and each university needs to download the SCORM files and host them on their own server. It is also recognised that universities are more likely to adopt the resource if they can customise it to their own context. For example it is possible to insert a university logo and contact details for disability staff, and this increases the relevance of the resource for trainees. The material is licensed by Creative Commons, but obviously the technical staff need to be informed of the downloading processes, and so a list of technical instructions has been compiled and time allocated to answer specific questions. Offers have been made to share information electronically, through virtual meetings, or, in selected sites, through face to face meetings and presentation by project staff.

Disability officers have been key players in the project since its inception. All Australian universities were contacted through their respective disability support officers to inform them of the project and to invite expressions of interest in receiving further information about the release of the e-resources. By virtue of their position, disability officers are likely to support the implementation of the e-learning resource but they recognise they cannot do this on their own. Consequently they have been helpful in identifying key implementation personnel in their university, including human resources and technical staff. In addition to their work within their home university, the disability officers are also invaluable in publicising the resource across institutions. Many belong to relevant electronic mail lists such as Austed (the listserv of ATEND) or EdEquity (the list serve of EPHEA). Others sit on committees in the following organisations which will also be informed of the release of the resource: Network of National Disability Coordination Officers (NDCO); Australian Tertiary Education Network on Disability (ATEND); Disability Education Association of NSW / ACT (DEAN); Disability Adviser Network of the Canberra Region (DANCR); Australia and New Zealand Student Services Association (ANZSSA); Equity Practitioners in Higher Education Australasia (EPHEA); Australasian Adapted Technology User Group (AATUG); and Australasian Network of Students with Disability (ANSWD).

Outside the Universities, the Australian Association of Special Education (AASE) has been an important contributor to dissemination. Presentations about the progress of the resource have been made at National Council meetings at approximately six monthly intervals since the project began. National Council is attended by two or three special education experts in each state and territory who report back to their local chapters whose membership together total more than 700 persons. Although not all members work in higher education, AASE has helped to forefront the project in a number of educational arenas.

In addition, three conference presentations about the project have been confirmed in 2012. These are:

- Australian Association of Special Education Conference (Hobart, Tasmania, 12-13 July, 2012);
- The Australian Special Educators Principals' Conference (Perth 17-19 September, 2012); and
- Pathways conference (Australian Tertiary Education Network on Disability, 28-30 November, 2012).

11. Recommendations

1. That the HEADS-UP online training package be adopted by Australian universities as core staff training in their strategy of meeting the obligations under the Disability Standards for Education (2005).
2. That universities embed the training in human resource management to make the training more attractive to individual staff.
3. That universities use the customisation facility built into the package to make the wording and certain information more relevant to individual universities.
4. That universities provide staff who undertake the online training with the opportunity to engage in follow-up face to face training or discussion with disability officers to further their understanding of the provisions of the Disability Standards for Education.
5. That universities use the attached questionnaire to research the effect of the e-learning resource on their own university community.
6. That “as needs” support be provided to finance regular updates to the master package, in response to (for example) five yearly reviews of the Disability Standards for Education.

The screenshot displays the HEADS-UP online training package interface. At the top, the logo 'HEADS UP' is visible next to the title 'The Disability Standards for Education Reasonable Adjustments'. The main content area contains text explaining that the Disability Standards for Education (DSE) require universities to make reasonable adjustments for students with disabilities. It defines 'reasonable adjustments' as changes to the 'usual way' of doing things, such as re-designing application forms for screen readers or providing extra time for exams. A link to the 'Disability Office' is provided, with a note that they can help implement the DSE. A 'Disability Office' pop-up window is overlaid on the right, containing text about the role of the Disability Office and a link to 'reasonable adjustments'. A 'Close' button is in the top right of the pop-up. A 'Select the link above.' prompt is at the bottom of the pop-up. A 'Select Next to Continue.' prompt is at the bottom right of the main content area. A navigation bar at the bottom includes icons for YouTube, Menu, Help, Back, and Next. A green box on the left side of the screenshot contains the text: 'Information presented with options for learners to seek additional detail by clicking links. Lesson 2'.

Figure 9
Lesson excerpt: Reasonable Adjustments

12. References

- Attorney's General Department, Commonwealth of Australia. (2006). *Disability Standards for Education 2005 plus Guidance Notes*. Available from http://www.deewr.gov.au/Schooling/Programs/Documents/Disability_Standards_Education_Guidance_Notes_pdf.pdf
- Australian Human Rights Commission. (n.d.). *Disability Rights*. Available on <http://www.hreoc.gov.au/>
- Beetham, H., & Sharpe, R. (Eds.). (2007). *Rethinking pedagogy for a digital age: Designing and delivering e-learning*. NY: Routledge.
- Brink, C. (2009). "Standards will drop" – and other fears about the equality agenda in higher education. *Higher Education Management and Policy*. 21, 19-37.
- Cavallari, B. (n.d.). Using technology to improve teaching and learning. Teaching and Educational Development Institute, The University of Queensland. Available from <http://www.uq.edu.au/teaching-learning/download/workshops/innovation-technology-tl.ppt>
- Cumming, J. J. & Dickson, E.A. (2007). Equity in assessment: Discrimination and disability issues from an Australian legal perspective. *Education and the Law*, 19, 201-220.
- Fan, W. & Yan, Z. (2009). Factors affecting response rates of the web survey: A systematic review. Available from <http://dx.doi.org/10.1016/j.chb.2009.10.015>
- Fisher, J.B., Schumaker, J.B., Culbertson, J., & Deshler D.D. (2010). Effects of a computerized professional development program on teacher and student outcomes. *Journal of Teacher Education*, 61, 302.
- Gosden, R. & Hampton, G. (2001). Academic standards versus disability rights. Available from <http://ultibase.rmit.edu.au/Articles/dec00/gosden1.htm>
- Greenlaw, C. & Brown-Welty, S. (2009). A Comparison of web-based and paper-based methods: Testing assumptions of survey mode and response cost. Available from <http://erx.sagepub.com/content/33/5/464>
- Lang, M. & Fox, L. (2004). Breaking with tradition: Providing effective professional development for instructional personnel supporting students with severe disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 27, 163.
- Pardey, S. (2008). Finding and keeping UDL champions: Introducing change. *Paper presented at Pathways 9 Conference*. Melbourne, Australia.

Payne, T. & Poot, A. (2008). Creating Accessible Teaching and Support (CATS) initiatives. *Paper presented at Pathways 9*. Melbourne, Australia.

Ryan, J. (2007). Learning disabilities in Australian universities: Hidden, ignored, and unwelcome. *Journal of Learning Disabilities*, 40, 436.

Schumaker, J., Fisher, B., & Walsh, L.D. (2010). The effects of a computerized professional development program on teachers and students with and without disabilities in secondary general education classes. *Learning Disability Quarterly*, 33(2), 111-131.

Smith, M. (2010). Lecturers' attitudes to inclusive teaching practice at a UK university: Will staff "resistance" hinder implementation? *Tertiary Education and Management*. 16, 211-227.

University of Western Sydney (2011). *Inherent Requirements Resource Package*. Available from http://www.uws.edu.au/ir/inherent_requirements

Appendices

Appendix A: Trial Pre Training Questionnaire

PRE TRAINING QUESTIONNAIRE FOR DSE TRIAL

This section will give us some information about you.

Please note that this information is confidential and will only be available to the HEADS-UP Team, and not your university.

Are you at?

- Australian National University University of Canberra

Are you?

- Male Female

Please state your organisational or academic unit, or area of work

Is your primary role at your University:

- Academic / teaching / research
 General / professional / administrative
 Executive / Senior Management

Are you?

- Full time
 Part-time / casual (ongoing)
 Sessional / contract (non ongoing)

In ANY role at the University, do you work regularly with students (with or without disability)?

- Yes No

Have you previously undertaken formal training in the Disability Standards for Education (DSE)?

- Yes No

This section will give us some idea about what you believe about students with disability at University.

Please note that we seek your ideas even if some of the questions seem outside your formal work role.

I feel confident that I can deal effectively with students with disability in my role

- Strongly Agree

- Agree
- Neutral
- Disagree
- Strongly Disagree

Changes made for students with disability can benefit ALL students

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I am concerned that making allowances for students with disability will lead to a drop in academic standards

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Our administration and teaching are already as flexible as is reasonable to expect

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Students with disability will find university study too difficult

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Making assessment adjustments for students with disability is unfair to students without disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Universities should accept a student with disability who can meet the inherent requirements of the course, irrespective of their employment prospect in that field

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I believe that students use their disability as an excuse when they are not doing well academically

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I feel effective in working with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I receive sufficient support from my work place when working with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

If approached by a student with disability, I know what formal procedures to follow

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I know where to find information at my University to help me work with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I feel confident that I could support a student with disability when they are in an obvious state of distress

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

This section will give us some idea of what you have done, or would do, when working with a student with disability in your role at University.

I make it known I will consider additional needs of students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I know when to contact the Disability Office

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I spend / would spend extra time (in addition to the normal time I spend with any student) helping students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

In my work I would act to meet the educational needs of students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

When a student with disability is having difficulties, I try hard to find out why so I can do something about it

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Do you wish to be part of the prize draws

- Yes
- No

If YES above, for the major prize, will you be interested in

- Not selected
- An ipad or other tablet
- Air travel (max value \$1000)
- Accommodation for two at your favourite hotel (max value \$1000)

Thank you for completing this Pre Training Questionnaire, now go ahead and enjoy the training itself.

Appendix B: Trial Post Training Questionnaire

POST TRAINING QUESTIONNAIRE FOR DSE TRAINING

Your answers in the following section will give us some idea about what you believe about students with disability at University.

Please answer these without referring to your answers in the Pre Training Questionnaire. Also, please note that we seek your ideas even if the question seems outside your formal work role.

I feel confident that I can deal effectively with students with disability in my role

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Changes made for students with disability can benefit ALL students

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I am concerned that making allowances for students with disability will lead to a drop in academic standards

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Our administration and teaching are already as flexible as is reasonable to expect

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Students with disability will find University study too difficult

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Making assessment adjustments for students with disability is unfair to students without disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Universities should accept a student with disability who can meet the inherent requirements of the course, irrespective of their employment prospects in that field

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I believe that students use their disability as an excuse when they are not doing well academically

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I feel effective in working with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I receive sufficient support from my work place when working with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

If approached by a student with disability, I know what formal procedures to follow

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I know where to find information at my University to help me work with students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I feel confident that I could support a student with disability when they are in an obvious state of distress

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Your answers in this section will give us some idea of what you are likely to do in future when working with a student with disability in your role at the university

I will make it known I will consider additional needs of students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I know when to contact the Disability Office

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I will spend extra time (in addition to the normal time I spend with any student) helping students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

In my work I would act to meet the educational needs of students with disability

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

When a student with disability is having difficulties, I will try hard to find out why so I can do something about it

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

This section asks you for your thoughts about the training package overall.

I found the training easy to do as an interactive online format

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I found the on-screen instructions clear and easy to follow

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I found that the way the training was presented made learning easy for me

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

This training is relevant to my work at the University

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

This training will be useful in my actual day to day work

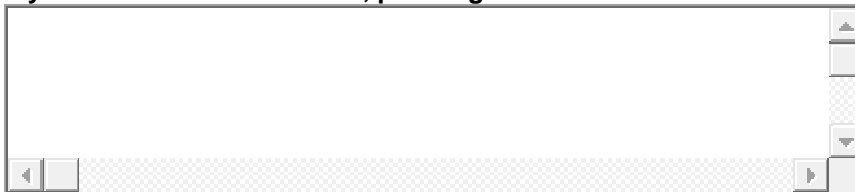
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

This section will give us your ideas of what further or other training about students with disability you would like.

On which aspects of working with students with disability would you like to receive more training or information (click as many as you wish)?

- Admissions
- Student induction
- Running practical sessions, fieldwork
- Practical placements in external settings
- Anti discrimination legislation and your obligations
- Nature of specific disabilities
- Running classes and groups which are inclusive
- Assessment and feedback for students with disability
- Curriculum design to cater for students with disability
- Alternative formats for course materials and presentations
- Other

If you clicked “Other” above, please give details



How would you best like to get the additional training or information (click as many as you wish)?

- Regular newsletter updates
- Having a “show and tell” week with events and activities
- Engaging in an online discussion forum
- Being part of a network of people meeting regularly
- Being part of a network of people meeting for special events
- Addition online training
- Guided reading / website information
- Face to face training with an expert presenter

This section asks you two questions about doing the training.

How long in total did it take you to complete the training (NOT including the Questionnaires)?

- Less than 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- More than 2 hours

How many sessions did it take you to complete the training (that is, the number of times you went out of the site and returned to it later - NOT including the Questionnaires)

- Did all in one go
- Did in 2 goes
- Did in 3 goes
- Did in 4 or more goes

Please write any comments or suggestions in the box below about how the training was presented or about the issues raised.



Appendix C: Trial Lesson Feedback

LESSON FEEDBACK

These are some questions about how you found the lesson.

1. I understood the content in Lesson 1

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2. The content of Lesson 1 is relevant to my work role

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

3. The content of Lesson 1 will be useful to me in my job

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

4. The scenario/s used here supported the learning

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

5. The scenario/s used here were relevant to my job

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Appendix D: Face to Face & Online Formats



DISABILITY TRAINING

EVALUATING FACE TO FACE and ONLINE FORMATS

1. Your employment is

- Full time
- Part time/ongoing
- Sessional/contract/non-ongoing

2. Your Faculty/Business Unit is

3. Do you mostly?

- Deal directly with students
- NOT deal directly with students
- Other _____

4. Which Lessons of the Online Training have you completed?

- No lessons at all → *go to item 12*
- Lesson 1 only
- Lessons 1 & 2 only
- Lessons 1, 2 and 3

5. Did you find the Online Training on its own?

- Very effective
- Mostly effective
- Partly effective
- Not effective

6. Did you find the Face to Face Training on its own?

- Very effective
- Mostly effective
- Partly effective
- Not effective

7. Did you find doing both the Online and Face to Face Training?

- More effective than just one alone
- Less effective than just one alone

8. Circle 'MORE' or 'LESS' for each statement below which better describes your experience

9a. The Face to Face Training made the Online Training **MORE / LESS** meaningful

9b. The Online Training made the Face to Face Training **MORE / LESS** meaningful

9. Of the two forms of training, did you prefer (liked better)?

Online Training

Face to Face Training

Why _____

10. Would you have preferred having the Face to Face Training BEFORE the Online Training?

Yes

No

Not sure

11. Please add any other comments about the two types of training

*If you had completed **all** the lessons of the Online Training, **STOP HERE**. If you did **not** complete all lessons, continue:*

12. Did you NOT complete the Online Training because (mark all that apply)

You just ran out of time

You had technical problems with the package

You found it irrelevant or not useful

Other _____

With thanks from the HEADS-UP Team