

*teaching & learning*

# How do we meet the challenge of diversity?



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**T**he nature of education is constantly changing. Education is continuously responding to new developments in teaching and learning through research, and local, national and international trends and directions.

The changes are also shaped increasingly by the information age, its focus on globalisation and on technology. Many new doors of opportunity are opening and these are having a significant, long lasting and positive impact on the quality of life experienced by many people living with a disability. People with disabilities are accessing more and more services in the community, as well as enhancing their personal contributions to the broader community.

Since 1992, people with a disability living in Australia have been supported by the Commonwealth Disability Discrimination Act (DDA). The DDA defines who it supports and impacts on the ways people with a disability access life in the community. The DDA specifically addresses:

employment; education (from preschool to post graduate); access to premises used by the public (including transport); the provision of goods, services and facilities; accommodation (excluding privately owned and occupied residential accommodation); the purchase of land; activities of clubs and associations; sport, and the administration of Commonwealth laws and programs.

In August 2005, the DDA will be further clarified for education providers when the Australian Government implements the Disability Standards for Education 2004. These Standards will apply across all states and territories.

## What are the Disability Standards for Education 2004?

The Disability Standards for Education 2004 will underpin the DDA and further clarify standards for all Australian education and training providers in providing access to people with disabilities to educational services. The Standards will specifically apply to the following areas of education:

- enrolment
- participation
- curriculum development, accreditation and delivery
- student support services
- elimination of harassment and victimisation.

The Standards reflect evolving community attitudes and responses to disability by setting new access benchmarks for education and

training services. Within educational contexts, the Standards focus on a student with a disability being treated *on the same basis* as a student without a disability.

The Australian Bureau of Statistics estimates that one in five Australians qualify as having a disability under the DDA. More and more people with a disability are increasingly accessing services and provisions accessed by those without a disability. Education is no exception and, as increasing numbers of students with disabilities are being supported in regular classes, many more teachers are gaining new skills in their planning and teaching to cater for an expanding range of diverse learners.

Further information and a copy of the Disability Standards for Education 2004 can be obtained from the *Australian Government: Attorney General's Department: Draft Disability Standards for Education* web site at <http://www.ag.gov.au/DSFE>

## What does this mean for teachers working with students who have diverse learning needs?

Teachers are responsive learners who constantly question what they do. In catering for the learning diversity in their classrooms, teachers regularly seek advice and guidance around the types of accommodations and adjustments they can make to various Board of Studies NSW syllabuses. These accommodations and adjustments enable their students to participate fully

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in classroom learning experiences. Accommodations and adjustments are measures or actions taken in relation to the learning environment, teaching, learning, and assessment, that enable a student with special needs to access and participate fully in achieving syllabus outcomes and content.

Making curriculum adjustments is not a new concept for teachers. Teachers plan carefully to assist students to access core curriculum outcomes and content and to demonstrate their learning in multiple ways without compromising learning outcomes.

Teachers make adjustments by finding alternate ways for students with special needs to achieve learning outcomes.

They find ways to minimise the impact of a student's disability or learning difficulty on their learning and, in so doing, focus on the student's achievement, not on the student's problem.

Teachers frequently seek advice and guidance around curriculum adjustments for students who have significant support needs in communication. These students include those with complex and multiple disabilities, students with challenging behaviours, or students with severe expressive and receptive language disorders.

## What are some adjustments teachers make to support learning?

Some curriculum adjustments regularly used by teachers to support the learning of students who experience communication difficulties are:

- visual cues to aid understanding or expression
- alternative formats such as large print, Braille, or subtitled videos and DVDs
- oral/sign interpreters or readers and scribes
- additional support through group work, peer or volunteer tutoring, and/or other individual assistance
- changes to the layout or presentation of material, e.g. fewer distracters on a page, coloured overlays
- changes to classroom organisation, e.g. positioning the student to enhance participation or maximise access to instruction
- scaffolds to support responses, oral and written, e.g. a planning proforma to guide responses or a visual timetable to support participation
- electronic books rather than reading only

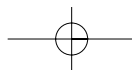
- note taking by peers
- outlined texts with the key points highlighted.

The constant evolution of adaptive technologies and software applications is further assisting teachers to provide strengthened and more independent support to students with disabilities and learning difficulties. Teachers can effectively support students to participate fully and learn along with their peers through the use of technology which assists students to:

- write
- scan text
- read text
- speak aloud to communicate
- record information.

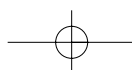
In some instances, students with a severe communication disorder can access a speech output device for communicating in class discussions or presentations.

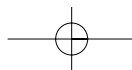
The following table highlights some of the types of technology and software now available to facilitate student learning. ■





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Item	Features	Examples
Portable note takers	<p>These devices are an alternative to using pen or pencil and may assist students with fine motor difficulties.</p> <p>They may have any of the following features:</p> <ul style="list-style-type: none"> <li>• typing tutor</li> <li>• calculator</li> <li>• telephone directory</li> <li>• calendar</li> <li>• floppy disk drive.</li> </ul>	<p><i>AlphaSmart</i>  <i>Calculuscribe</i>  <i>LaserPC</i></p>
Alternative keyboards Touch sensitive keypads	<p>These devices can support students with significant motor difficulties. They are an alternative to using pen or pencil or traditional keyboards. They can support individualisation and the development of local resources related to specific areas. Additional commercial software is available to support curriculum activities.</p>	<p><i>IntelliKeys</i>  <i>IntelliPics</i>  <i>Overlay maker</i>  <i>Click it</i>  <i>IntelliMathics</i>  <i>IntelliTalk</i>                      Discover boards                      Concept keyboards</p>
Screen reading software; image enlargement	<p>This software support students with significant vision impairments. It reads aloud or enlarges on screen material. It can provide access to any:</p> <ul style="list-style-type: none"> <li>• on screen text</li> <li>• tagged images</li> <li>• charts on the computer.</li> </ul>	<p><i>JAWS® for Windows</i>  <i>Window-Eyes</i>  <i>ZoomText</i></p>
Talking word processors	<p>This software can support students who have difficulties reading and writing. In particular, it provides auditory cues during writing activities.</p> <p>They can be used with imported or converted scanned text. The software 'reads' by:</p> <ul style="list-style-type: none"> <li>• word</li> <li>• sentence</li> <li>• paragraph</li> </ul>	<p><i>Kurzweil 3000</i>  <i>IntelliTalk</i>  <i>Write: OutLoud</i>  <i>Clicker 4</i>  <i>Dragon</i>  <i>NaturallySpeaking</i>  <i>TextHelp®: Type &amp; Talk</i>  <i>TextHelp®: Read &amp; Write</i></p>
Word prediction software	<p>This type of software can also support students who have difficulties reading and writing. The software can reduce the number of keystrokes required by students when typing by providing or predicting the words being typed. It can be especially useful for students experiencing difficulties with spelling.</p>	<p><i>Co:Writer</i>  <i>TextHELP®: Type &amp; Talk</i>  <i>TextHELP®: Read &amp; Write</i></p>
Planning and organising software	<p>Planning tools can be useful in supporting students to take notes on a topic, plan a writing task, and develop concept or mind maps to aid remembering. The software can provide structure with displays in text form and diagram form.</p>	<p><i>Kidspiration</i>  <i>Spark-Space</i>  <i>Task Builder</i></p>
Spelling and word checkers	<p>Spell checkers can support students who have difficulties with reading and spelling. The <i>Reading pen</i> scans and 'reads' single words aloud.</p>	<p><i>Reading pen</i>  <i>Language master dictionary</i>  <i>Spellmasters</i></p>





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	The <i>Language master dictionary</i> has voice output and can be used by students with vision impairment	<i>Franklin spellers</i>
Talking books Literacy programs	There are a number of companies producing talking book software that can support students learning to read by providing additional modelled reading opportunities. Some of the software target specific aspects of literacy: <ul style="list-style-type: none"> <li>• fluency</li> <li>• sight vocabulary</li> <li>• comprehension</li> <li>• syllabification</li> <li>• cloze</li> <li>• retell story (pictures).</li> </ul> The software may highlight: <ul style="list-style-type: none"> <li>words</li> <li>sentences</li> <li>paragraphs, being 'read'</li> </ul>	<i>Start to finish</i> <i>PM readers</i> <i>Fitzroy readers</i> <i>Literacy place</i> <i>Electronic library</i> Kurzweil <i>Starspell</i> <i>Wiggle Works</i> <i>Daisy Series</i>
Assistive listening devices	Supports student with hearing impairments. These devices can be used to direct: <ul style="list-style-type: none"> <li>• teacher talk</li> <li>• discussion</li> <li>• audio presentations to the student.</li> </ul> Sound field amplification loops have been placed in many classrooms where there is a high incidence of middle ear infection (Otitis Media) to support hearing.	Sound field amplification Hearing loops
Assistive communication devices  	These devices can be used to augment the communication skills of students who are non verbal. They are voice output devices that have words or pictures attached. Messages can be recorded and then activated with a push of a button.	<i>Go Talk</i> <i>Step by Step</i>  

**Disclaimer:** The listing of a product in any part of this article in no way implies any form of endorsement of that product by the NSW Department of Education and Training.

