



**Vision**

VISION AUSTRALIA FOUNDATION

**Senate Employment, Workplace Relations and  
Education References Committee**

**Inquiry into the Education of Students with  
Disabilities**

**Submission**

**From**

**Vision Australia Foundation**

**26 April 2002**

Vision Australia Foundation requests that the Committee consider the following issues in the course of its deliberations:

It is now essential for participation in education that students be able to access and manipulate information using computers. For example, schools and universities are developing electronic course materials and providing information resources electronically to replace resources once held in libraries in hard copy. These developments assume all students will be able to use personal computers to access these systems.

For students with disabilities, individual challenges such as being unable to read a computer screen, manipulate a keyboard or a mouse, can be overcome by the use of assistive technologies. These include such things as screen reading software, screen magnification software, on screen keyboards, specially designed keyboards, alternatives to a conventional mouse and other devices. Through the use of assistive technologies many students with disabilities can use a computer independently to access information resources compliant with accessible design standards.

However, the fields of assistive technology and accessible design are not widely understood in Australia. In particular the following issues need to be addressed:

### **TRAINING NEEDS FOR PROFESSIONALS IN THE FIELD OF ASSISTIVE TECHNOLOGIES**

The education system in Australia is not producing occupational therapists or computer technicians with in depth knowledge of assistive technologies. The low incidence of some disabilities, and the broad range of assistive technologies with which staff must be familiar to be able to recommend optimum solutions to individuals, means such training is an essential part of effective support for individuals with disabilities.

Vision Australia has had to train staff in-house at considerable expense and delay in their becoming effective in working with our clients requiring advice and training on the use of assistive technologies. While this is an alternative training system to the provision of courses in the education system, it needs to be properly funded if demand for services around assistive technologies is to be met.

### **TRAINING AND TECHNICAL SUPPORT NEEDS FOR STUDENTS**

There is great difficulty delivering adequate training and technical support to individuals reliant on assistive technologies. While limited training is available in metropolitan areas, it is not readily available in regional centres. Technical support is also difficult to source in both metropolitan and regional areas.

Funding of support services to ensure adequate training and technical support for is essential if students with disabilities are to reap the benefits of assistive technologies.

Given the scarcity of skilled people in these fields, a combined Commonwealth and state strategy to foster a single support network would seem the best approach.

Continuity of technical support in the transition from school (a relatively high support environment) to higher education would ease the transition to the more self reliant approach to learning.

## **EDUCATION SYSTEM INFORMATION INFRASTRUCTURE IS OFTEN NOT ACCESSIBLE**

Assistive technologies used by students with disabilities cannot access all electronic information. They can access electronic information resources which conform to accessibility guidelines published by the World Wide Web consortium (W3C). Much of the electronic information resources in use in schools and universities today is inaccessible to students reliant on assistive technologies as the resources are not compliant with the W3C standards.

An education campaign is required to ensure schools and universities know how to assess electronic resources for accessibility, and how to specify accessibility as a requirement in tenders for the authoring or supply of electronic information resources. Libraries need to understand how to distinguish information products which are accessible from those which are not.

Ensuring wherever possible that electronic information resources are accessible will reduce the requirement for production of alternative format materials such as braille, audio, large print and electronic text files as an alternative to the information resources used by students without disabilities.

Post secondary education is increasingly relying on electronic interfaces with students for both administration and teaching. Funding accessibility audits for educational institutions would assist in the widespread adoption of authoring and information purchasing standards which would minimise accessibility barriers, and thus minimise the need to convert information into alternative formats.

## **PROVISION OF ACCESS TO INFORMATION IN ALTERNATIVE FORMATS**

Some information is simply not accessible in the original and must be transcribed in alternative formats such as Braille, audio, large print and electronic text. Mathematics and Chemistry for example have special Braille codes for describing the symbols and formulae.

There are standards for the marking up of electronic text in XML and related software which can now facilitate the production of Braille, Large Print and structured electronic text from a single master file.

Libraries for the Blind in the DAISY consortium have developed a standard for producing digital talking books comprising text, text and audio or audio alone. This standard has recently been adopted by the United States as a national standard, ANSI standard Z39.86.

While following of these standards facilitates the exchange of materials in alternative formats between libraries for people with print disabilities, the skill sets for transcription of materials in ways conformant with these standards are not widely held in Australia.

Rather than universities trying to produce alternative format materials individually as a “cottage industry” there are advantages in properly resourcing the existing agencies to produce these materials. Investment in one set of high speed OCR scanning equipment, heavy duty Braille embossers and other equipment would improve the turn around time on materials being produced in alternative format from what is achievable now.

The opportunity also exists for resource sharing if materials already made available in alternative format to any one student can be easily identified and utilised by other students with print disabilities. A single server should be established and managed for this purpose.

## **STAFF EXPERTISE AT VISION AUSTRALIA**

Vision Australia Foundation has staff with expertise and practical experience in:

- the prescription, training and technical support for assistive technologies
- Web site and other electronic information accessibility using assistive technologies
- Membership of the Education and Outreach Working Group of the World Wide Web Consortium Web Accessibility Initiative
- Production of alternative format materials including Braille, audio, large print and electronic text.

We would welcome the opportunity to work with the Senate Committee on preparing its response to its terms of reference.

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