Premier’s IOOF Centre for Educational and Medical Research Itinerant Support Teacher (Vision) Scholarship

Accessing the Australian National Curriculum: what skills and technology do blind students need?

Shane Doepel

Murwillumbah Public School

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Australia now has a National Curriculum, yet education systems and supports for blind students in Australian states and territories vary significantly. Our National Curriculum promotes and encourages the use of new technologies to provide access to a broader range of digital curriculum resources (ACARA, 2012b). Teachers now connect students to broader and richer intellectual experiences and opportunities, yet these are often not accessible to the blind student.

For this study, in-depth interviews were conducted with professional blind citizens from Australia and New Zealand. Experiences and opinions were sought about the essential skills they gained from their education that enabled them to become the successful professionals they are today. Analysis of 22participants’ interviews and written contributions revealed four clear themes of essential skills that were significant to the participants: braille skills, access technology skills, self-advocacy/social skills and independence skills. Of these, braille skills emerged as the most dominant and most crucial component skill.

Also for this study, Australian and New Zealand vision education systems were investigated to determine best practices in vision education. These best practices were then correlated to the four themes that emerged from the responses from the blind professionals. It was found that immersion courses used in New Zealand, Victoria, South Australia and Western Australia provided targeted and relevant training for blind students.

The research found that including blind professionals as partners in educational planning and development processes was crucial to ensuring genuine understanding of the educational support requirements for blind students. With the extremely low incidence of blindness in our community, false assumptions about blind citizens predominate. Unfortunately even in our education system, low expectations and prejudice persist.

A survey of NSW Vision Support Teachers identified areas where systems need improvement. To develop state-wide quality programs and information technology systems that support blind students’ access to the National Curriculum, better communication and understanding of blind students’ skills are required. Partnerships are needed with: blind community members, education administrators, blind teachers/role models, information technology (IT) administrators, blind technology experts and practicing vision educators.

Professionals Share their Educational Experience and Advice

Blind professional adults from Australia (one from Austria studying in Australia) and New Zealand shared their experiences and knowledge to provide clear indications of the important factors leading to their educational success. Eighteen participants answered seven questions as part of an in-depth video interview. Four participants answered questions via email. Interviewees were also invited to add any additional information or ideas they felt were relevant.

Best Educational Practice in our Region for Students who are Blind

Personal visits were made to seven vision education centres in Australia and New Zealand. Questions and information regarding the research topic were forwarded in advance of the visits, with the key focus on finding practical best-practice education for blind students. Information was gathered during visits and also from the websites of each jurisdiction.

The four themes from the blind professionals (braille skills, access technology skills, self-advocacy/social skills and independence skills) were then used as headings, and educational practices to address these skills categorised accordingly. To ensure the accuracy of the information gathered, this information in the heading format was then emailed to each of the four key participant jurisdictions for verification and authentication.

NSW Survey of Vision Support Teachers

A questionnaire and written comments were invited from NSW vision support teachers. This survey was focused mainly on access technology support, training and development but also included other support services available at state level.

The survey was available on the Survey Monkey platform and made available as a link. This survey was designed to be completely anonymous (even to me as researcher). The survey link was distributed through vision support teacher assistant principals, who passed the link on to their team members. Fifty-four vision support teachers participated in the survey with many contributing written responses.

Research Analysis and Findings

Themes – Professional Blind Participants

Braille Skills

All blind participants noted braille as being a major contributing factor in their educational success and most credited their knowledge of braille as the most significant factor in their development of literacy and numeracy. Most of the participants were very strident in their statements about braille being a key to understanding language. Many noted that only with skills in braille are they able to effectively participate in the workplace.

Discussion about the general population’s lack of understanding about braille as being old fashioned and unnecessary in education today was a common concern for most of the participants.

Access Technology Skills

Most of the questions for participants related to technology. While the importance of technology in education is already known, it was thought common approaches and themes related to blind access technology would emerge. The importance of access technology was a very significant theme, with all participants noting the fantastic increase in access to information that is now available to the blind user. Technology was seen as complementary to Braille, just as technology is complementary to sighted people using print. All participants did use computers with screen reading software.

*Importance of Using a Range of Technology*

A common theme was the wide range of devices that individuals used to access and store information. Computers, iPads, Android devices, iPhones, scanners, embossers, voice recorders and Apps were used by the participants. All participants but one use a refreshable braille device; some linked the device to a laptop/computer or IOS device, but more than half use standalone refreshable braille devices like BrailleNote and BrailleSense. All participants valued the touch-typing skills that they learnt at school, and use qwerty keyboards even though they also use braille devices. Many advised students to learn touch typing early in their school years.

*Barriers to Accessing Information*

A notable barrier was the prevalence of inaccessible websites, with poor design making navigation impossible. Images without text tags were also inaccessible and frustrating for blind users. Scanned PDF documents were noted as major barriers to accessing information, as were Word documents that don’t employ appropriate heading levels to enable navigation.

Failure to properly test the information technology (IT) systems, networks and equipment was seen as a major barrier to accessing information. Many participants had experiences in which they were told (by sighted IT personnel) that a website or document or system was accessible, but they found that it wasn’t. Many participants noted the need to have systems and equipment tested by a blind technology user as the best way to ensure accessibility.

Self-Advocacy/Social Skills

Self-advocacy/social skills were noted as essential skills for blind students. Participants discussed the common misunderstandings and prejudices of the general public, businesses and institutions. They cited their ability to clearly articulate and communicate their needs as a blind person as a fundamental skill needed to navigate their daily lives. As blindness is such a low incidence disability, combined with the fear that many sighted people have of blindness, means that self-advocacy/social skills are crucial skills for the blind person. The participants noted that they need to express their needs with great skill and tact on a daily basis.

A sighted person meeting a blind person for the first time can be very nervous; some participants discussed helping the sighted person to feel more relaxed about meeting a blind person. Asking for help, access and support is an important skill for the blind student and doing so with tact and social awareness is a complex skill that needs to be taught over time.

Independence Skills

Developing independence skills was the fourth very strong theme to emerge from the video interview and questionnaires. Not only was independence of travel (Orientation and Mobility – use of white cane etc) highly valued but also independent living, recreational activities, personal organisation and access to information.

A common idea was the link between having the freedom to explore from a young age and developing independence as an adult. Many identified the benefits of parents not making excuses for their blind child, but rather insisting they shared many of the same tasks as their siblings. Being allowed to make mistakes and not being fearful of new experiences was considered important.

Participants noted the importance of role models in their early experiences and most noted the importance of peer support for their education.

Vision Support Education for Blind Students
Best Practice in our Region

Immersion Courses–Supporting Essential Skills for the Blind Student

Immersion courses with a strong focus on braille and access technology were found in: New Zealand, Victoria, South Australia and Western Australia. The courses are generally held each term and with groups determined by age level. The courses are generally held over a number of days with the main focus on either braille skills or access technology while covering curriculum topics. Royal Institute for Deaf and Blind Students also hold a braille camp each year on campus as part of the Tele-School.

The immersion courses were seen as a way of providing quality skill training in braille and access technology, and included the elements of: peer support and role-model support as well as training and development for the key members of the learning support team from the regular school. The courses offer peer support to students from an early age so that students know from the start of their education that they are not the only ones in the world using braille. The students meet other students and adults who use and value Braille, so they develop a positive attitude to their braille literacy. The contact with other braille professionals also ensures a quality and consistency of braille; it is known that isolation can mean inadvertently falling into bad braille code habits (Rosenblum, 2014).

 The immersion courses provide relevant inservice training for vision support teachers, but also class teachers, teacher’s aides, parents and transcribers. As the staff accompany the blind student in the immersion classes it enables all staff to gain experience and inservice at the same time and so develop consistency of approach that is then taken back and continued at the mainstream school. Once back at the regular school they also know that they have back-up support from the vision education school or vision resource centre where the immersion courses are held.

Immersion courses for access technology support are particularly efficient models for support. The students bring along their own access technology devices so training is targeted to their needs. Students are supported to extend their skills and independence with their devices. At the Victorian resource centre there are two blind access technology users on staff. They also invite a guest blind access technology user to support students on a regular basis. Blind users of technology were highly valued as members of the immersion course programs. Royal Institute for Deaf and Blind Students (RIDBC) and Queensland Department of Education, Training and Employment (DETE) each employ a blind teacher as an access technology teacher and consultant.

While the immersion courses were centred on braille and access technology skills, it was recognised by the educators that the courses were also the perfect vehicle to deliver skills training support in self-advocacy/social skills and independence skills training.

As one of the educators I met noted: ‘The family are the child’s first and most important teachers and many of them have never met a blind person before having their blind child.’ Training and encouragement for the family is crucial as the student needs to be encouraged and supported at home with the independence and advocacy/social skills as well as the braille and access technology skills.

Partnerships with Citizens who are Blind, Vision Support Education
and Education Administration

Blind and Low Vision Education Network New Zealand (BLENNZ) is an outstanding provider of quality vision support education in our region. Their supports and programs include: a 13 member assessment team (that also travels to the regions), Homai Campus special school, preschool, immersion course program, National Visiting Teacher Service supporting inclusion in mainstream school, and a residential transition training facility.

It is the partnership that BLENNZ has developed with The Blind Foundation and The Ministry of Education that has enabled solid understanding and commitments between the groups. This partnership was set up with the establishment of BLENNZ and it appears to be the best insurance that future developments in policy and organisational changes have a genuine understanding of the needs of blind students.

With blind professionals involved at the organisational level of education policy, perhaps blind teachers and blind staff members will be employed and recognised as essential to an education system that supports blind students.

Key Recommendations

* + Develop a NSW state-wide vision resource centre (along the lines of the State-wide Vision Resource Centre, Victoria, as a system with proven success and compatibility with the existing decentralised administration structure of the NSW Department of Education and Communities).
	+ Develop and deliver immersion courses for blind students in NSW modelled on the State-wide Vision Resource Centre, Victoria, Blind and Low Vision Education Network New Zealand, South Australian School for Vision Impaired and the Vision Education Service in Western Australian.
	+ Ensure blind professionals are key partners in the development and delivery of state and federal education policy for blind students.
	+ Employ blind professionals as teachers and access technology experts.
	+ Employ blind professionals to work with NSW DEC IT departments to ensure accessibility for blind users throughout the DEC IT system (including: universal design curriculum materials, network systems, websites, virtual learning environments, email platforms, and all multimedia classroom resources).
	+ Develop a more efficient and streamlined approach to the provision of and technical support for access technology for blind students.

General Discussion

Blindness requires a child to develop a number of skills that need to be practiced over time. Gordon Dutton (2013), Professor of Ophthalmology Neurology at Glasgow Caledonian University, has noted that it is now thought that at least 50 per cent of the brain is responsible for vision. This high impact disability requires skill training to enable students to learn the skills that come automatically to a sighted child. The experience of blind professionals clearly shows that with appropriate training, independent and highly successful careers are certainly achievable.

Looking at the issue of blind education purely in economic terms, the relatively small cost to society of providing quality skills-based education and access to the curriculum results in long-term economic gains. According to the Vision Australia (2009) research report *Social Return on Investment Index: ‘*For every $1 invested in Vision Australia’s Employment Services, $8.58 is created in social value …’ (p.1).Vision Australia engaged Social Ventures Australia (SVA) Consulting to undertake an assessment of the Children and Family Services using the Social Return on Investment (SROI) methodology to determine the economic gains.

*Every Student, Every School: Learning and Support Policy* (NSW Department of Education and Communities, 2012) is an important document that provides a framework for learning and support with five key elements: Teacher Quality, Accountability, Teaching and Learning, Collaboration and Curriculum (p.9). These five key elements fit well with the recommendations of this research, ie, *Curriculum: Working towards high quality outcomes through rigorous, meaningful and dignified learning for every student*, (NSW Department of Education and Communities, 2012, p.9).

Conclusion

Four skills that are essential for blind students’ education emerged as themes from interviews with 22 blind adult professionals. Braille emerged as the most dominant and crucial component skill with participants noting the fundamental importance of braille for literacy and numeracy. Access technology was also considered to be essential just as technology is now essential for all professionals in the workplace today. Self-advocacy/social skills were seen as crucial skills for all blind persons as blindness is so rare and poorly understood by the general population. Independence skills are to be encouraged from a young age to set blind children up for a life of possibilities with confidence and curiosity.

Blind individuals need to be included as key partners in the development, planning and delivery process for blind education policy. Understandings and partnerships among educators and departments of education, parents and administrations are keys to effectively implementing curriculum access for the blind student. False assumptions about education of blind students and access can be avoided by including blind professionals to work on the planning and implementation of Vision Support Education.

New Zealand’s long standing partnership with blind professionals is reflected in their comprehensive, quality, national blind education programs. Immersion courses address the four essential skill areas identified by the blind professionals. This approach is also employed by quality programs delivered from the Vision Resource Centre in Victoria, The School for Vision Impaired in South Australia and Vision Education Services in Western Australia.

Berryman and Innes (2014) noted the misguided events that Louis Braille witnessed at the Blind School in Paris, L’Institut National des Jeunes Aveugles, nearly 200 years ago. Well-meaning sighted directors of the school destroyed braille books and discredited the braille system in favour of more visually accessible books with embossed lettering. Thankfully sanity did prevail in Louis Braille’s lifetime when he and fellow blind teachers and students were heard as partners in the education process. The six dot Braille system was finally recognised as the key to literacy for blind students and braille was allowed to flourish.

Responses to the survey of NSW Vision Support Teachers as part of this research have revealed many barriers hindering the delivery of quality education for our blind students and limiting their access to the curriculum. The research has also found that several of our neighbouring education systems do have quality programs that support essential skill development in braille, self-advocacy/social skills, independence and technology for blind students. This better ensures those students have the best opportunity to access the National Australian Curriculum.

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