Journal of South Pacific Educators in Vision Impairment

Contents

Journal of the South Pacific Educators in Vision Impairment

SPEVI Vision

An Australian Educational system in which diversity is valued and disability would not be viewed as a characteristic by which to judge a student's worth.

SPEVI Mission

To stimulate professional and public debate and action on vision impairment issues and change which affects or has the potential to affect the daily lives of children and youth who are blind or vision impaired., while particularly emphasising concepts of inclusive, responsive school communities and interdependence between students and families within those communities where all people are valued.

Subscription Details

This Journal is provided free to SPEVI members as part of their annual membership benefits. There is an A$25.00 subscription fee per volume for non-members (A$35.00 for subscriptions outside the South Pacific region).

Please apply directly, enclosing your cheque or money order, payable to SPEVI. Prices include postage. Please pay in Australian dollars.

Address all correspondence to:

> Ms Sheila Klinger SPEVI
> South Australian School for Vision Impaired
> IB Duncan Avenue
> PARK HOLME SA 5043 Ph (08) 8277 5255
> sheila.klinger@sasvi.sa.edu.au

Call For Articles

The Journal of the South Pacific Educators in Vision Impairment publishes articles that explore the broad area of education for children and adults with vision impairment. Articles are published in refereed and non-refereed sections of the journal.

The JSPEVI editorial panel calls for articles in both categories.

Letters to the Editor

Members of the editorial panel wish to encourage discussions of important issues that affect the education of children and adults with vision impairments. The journal should be a vehicle for continuing dialogue about current and future directions. The editorial panel calls for letters that explore the many issues facing educators of students with sensory disabilities, particularly those arising from articles in the journal.

Guidelines for Contributors

The Journal of South Pacific Educators in Vision Impairment (SPEVI) is intended to provide a forum for scholarly exchange among people dedicated to and involved with the education and development of children, young adults and adults who are blind or vision impaired, particularly in the South Pacific region.

Articles considered for publication include:

- original research, with practical relevance to the education of persons who are blind or vision impaired,
- critical reviews of substantive areas,
- theoretical position papers,
- descriptions, reviews or evaluations of innovative instructional curricula, programs, or models of education for persons who are blind or vision impaired,
- conceptual papers, comprehensive reviews, case studies and policy analyses.

Manuscript Specifications

All material submitted for publication must conform in style to the Sixth Edition of the *Publication Manual of the American Psychological Association*, available from the APA Order Department, PO Box 2710, Hyattsville, MD, USA, 20784.

Abstract: All manuscripts, including Special Section items are to include an abstract of less than 120 words, giving a brief summary of the submission.

Author(s) Identification. Include the complete title, but no list of author(s) on the first page. On. subsequent pages carry only a running head. To assure anonymity in the review process, provide on a separate typed sheet the complete title of the article, the names of the author(s), professional status/title and place of employment. For the first named author or the co-author who will be handling correspondence, include complete return address details, email and facsimile and telephone number.

Body of article. Manuscripts should be typed on one side only of A4 or 8.5 x 11-inch (21 x 29.5cm) paper, upper and lower case, double spaced, with one-inch (3cm) margins on all four sides. Use subheadings at reasonable intervals to enhance readability. Number pages consecutively. Tables and figures are to be numbered and titled. Always refer in the text to Table 1 or Figure 2 and not to 'Table 1 above' or 'Figure 1 below'. All figures must be camera-ready. (e.g. provide each figure and table on a separate page in the body of the paper).

If the article is word processed, a copy of the article on disk will facilitate the publication process. Please send a copy of the article on disk preferably using Claris Works, Claris MacWrite Pro, Microsoft Word, or WordPerfect for the Macintosh or IBM. If another program is used, please send an ASCII or RTF file (for Macintosh) or RTF file (for IBM or IBM compatible computers) and indicate the word-processing program used to format the article.

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Review Process: Manuscripts will be acknowledged upon receipt. Following preliminary editorial review, articles will be sent to members of the Editorial Panel and where warranted, to consulting reviewers who have particular expertise in a subject. The review process may sometimes take up to three to four months. This journal uses the blind review system. The names of consulting reviewers will periodically be published in the journal.

The original manuscript will only be returned to the primary author if it is not accepted for publication and a stamped self-addressed envelope has been supplied. The other reviewed copies will remain the property of South Pacific Educators in Vision Impairment (SPEVI).

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Convening Editor

Dr Michael Steer RIDBC Renwick Centre
Royal Institute for Deaf and Blind Children
Private Bag 29
Parramatta NSW 2124 Australia
Telephone +61 2 9872 0814
Fax   +61 2 9873 1614
email mike.steer@ridbc.org.au

President's Message - Paul Pagliano

Welcome to this our fifth issue of the **Journal of the South Pacific Educators in Vision Impairment** (SPEVI). It is my great pleasure to write the introductory message and invite you to read through our latest collection of peer reviewed research articles and reports.

The SPEVI journal grew out of comments Dr Natalie Barraga made during her daily summaries at the 1974 biennial conference in Brisbane. While she congratulated the delegates on the excellent work being done, she also strongly urged members to share what they are doing with each other and with the rest of the world. The journal therefore has become our more formal way of publicly sharing with each other our experiences and expertise.

Together with our biennial conference, SPEVI blog and web site at http://blog.spevi.net the journal provides yet another significant way professionals, who work in the area of education of children and young people with vision impairment, are able to communicate with the field. What this current edition of the journal tells me, is that the profession, in spite of a concerning lack of funding in a number of regions, is surprisingly active and robust. It is very exciting for me to see the wide range of different research projects being conducted and I sincerely thank the contributors for their papers.

Of course, journals do not just produce themselves. They are the result of much behind the scenes work. For that reason, I would particularly like to thank Dr Mike Steer (Convening Editor), the editorial committee and the editorial advisory panel for the tremendous work they have done to prepare this edition. Mike has been the Convening Editor for all five editions of this journal, and he has done a good job. When preparing this introduction, I went back to our previous editions and I must say collectively they provide an impressive and important historical record of the research that has been conducted, and of professional activity in the South Pacific over the past decade. They also provide ample evidence that we have responded to Dr Barraga's recommendation. I think she would be thrilled. I therefore highly commend this issue of the journal to you. Good reading!

Editorial

The SPEVI Conference is always an unmatched opportunity for educators of blind and vision impaired students from all states and territories of Australia, New Zealand and countries in the South Pacific to meet face-to-face, share the latest best practice and enjoy being in the company of like- minded professionals in our unique, sparsely populated, highly specialised field. In 2013 the Conference will be held in Auckland. SPEVI NSW hosted the 2011 Biennial Conference from 16 to 21 January at the Marriott Sydney Harbour near Circular Quay in Downtown Sydney. Its theme was 'Unlocking student's potential: What's working for you?' The Organising Committee: Tricia d' Apice and Celia Vild from RIDBC, and Alison Stephen, Assistant Principal, Vision Impairment with the NSW Department of Education & Training brought in All Occasions Management from Thebarton, SA as specialist event managers, and they, known to us from their excellent management of the 2009 Adelaide Conference provided the very highest standard of organisation. Program Committee members for the event were: Alan Baynham, Michele Cutrupi, Tricia d' Apice, Frances Gentle, Josie Howse, Sue Silveira, and Mike Steer (chair). Sponsors: RIDBC and Vision Australia. Exhibitors: Quantum Technology, Spectronics and Humanware, with Pacific Island delegates sponsored by SPEVI Queensland, SPEVI Australia and the 'I do like it' Braille Program, with gift donations from Andrew Hestelow and Maria and Steve Payne.

Prior to the event, Frances Gentle as Pacific Region ICEVI Chairperson organised the Pacific EFA-VI Forum, jointly hosted by RIDBC and Vision Australia. Participants then attended the Biennial Conference. Some 24 people from 10 Pacific Island countries attended the Forum and Conference, of whom 19 were sponsored by AusAID. Countries represented at the Forum (in alphabetical order) were Australia, Federated States of Micronesia, Fiji Islands, Kiribati, Nauru, New Zealand, Palau Islands, Papua New Guinea, Solomon Islands, Samoa, Tonga, and Vanuatu. Participants included 14 representatives of government ministries/ departments of education and health, and eight representatives of national disability organisations (DPOs). Other participants included representatives of the Pacific Islands Forum Secretariat, Pacific Disability Forum, AusAID, RIDBC, Vision Australia, SPEVI, Centre for Eye Research Australia (CERA), and James Cook University School of Education.

The conference was preceded by the traditional SPEVI Councillors meeting followed by a Heads of Educational Services (HOES) meeting where it was decided to rename that group Leaders in Vision Education Services (LIVES). Conference keynotes for the first morning featured a stirring address from Commissioner Graeme Innes, AM of the Australian Human Rights Commission, and Julie Rae (Vision Australia) on international and national programs to increase accessible content. President Paul Pagliano made a presentation on behalf of SPEVI to John Berryman, CEO of RIDBC as special recognition of dedication to quality service

provision in our field. John's citation appears later in the journal. Each day started with keynote presentations and concluded with a daily summary.

Keynote presenters for the remainder of the conference were as follows:

- Dr Frances Mary d' Andrea from the University of Pittsburgh, on the changing nature of reading.
- Tim Connell, Managing Director of Quantum Technology gave a 'feisty' and provocative talk focussing on several areas in which SPEVI as a potentially influential professional association could 'lift its game'. Tim was presented with a certificate of special recognition for his many years of support to and leadership in our field.
- Michelle Knight and Michael Corrigan from the VisionEd Technology Centre on the continuum of support necessary for promoting life-long access.
- Sue Silveira, RIDBC Renwick Centre Research fellow on the new Australian Childhood Vision Impairment Register.
- Steve Ripley from Vision Australia's Deafblindness Services on new perspectives.
- Setereki Macanawai of the Pacific Disability Forum on Disability in the Pacific.
- Dawson Ko, VIP Online Society and Fashionable Eye Global, on having vision without sight.
- Dr Scot Hollier from Media Access Australia on contemporary and emerging technologies; Dr Carolyn Palmer, Finders University on social behaviour.

Each program day featured concurrent sessions in three strands on a wide variety of topics as well as special interest groups, and audience feedback on all of these was excellent. The second day culminated with the Conference Dinner, held as a spectacular Harbour Cruise. A SPEVI Special meeting was held on the final afternoon, when Life Memberships were presented to Deb Lewis and Sandie Mackevicius, about whom, later in the journal.

The technology era

At the professional development day organised by the Queensland Branch of SPEVI on 11 July this year, Phia Damsma gave a short presentation in her new role as SPEVI's Access Coordinator. She pointed out that there currently exist major differences in services for students who are blind or have low vision in Australia, as a result of their geographical location. As far as the implementation of assistive technology and computers is concerned, she said, it is a sad truth that Queensland is not doing as well as it should in offering students with vision impairment the best chance in their education, social life, and future career. This is despite the ready availability of many cost-effective and life enhancing technology-based solutions that can make a crucial difference to a child who is blind or has low vision. Phia continued:

Need for technology

We would not, she said, ask a fully sighted student to cut a piece of paper without a pair of scissors to use. Why is it that we expect a student who is blind to do homework, class assignments, projects, or a professional job, without providing him or her with the proper tools to achieve this? More and more, classroom settings require each student to be skilled in using a computer. Homework is to be handed in electronically, assignments are posted on an electronic blackboard and so forth. And being able to work with this technology becomes even more essential when students transition to tertiary education or to open employment. Students who are blind or have low vision in Queensland are supposed to be in an inclusive school environment, but lack of computers, assistive technologies, or proper skills to use them, too often close the door on the students in many aspects of their education, now and for the future. This, she pointed out, means they are being segregated in the mainstream because of their lack of access to information.

Equal access, technology, training, resources

A student who is blind or has low vision, can and should have the appropriate assistive technology to ensure equal access to print literacy. Skills training from a young age, is essential. Students not only have to be able to use the technology at hand, but also to use it almost without thinking, because their attention should be on the content of the lesson at hand, not on the technology used to access the information. Depending on an individual student's educational needs, appropriate technology should be selected for him or her to ensure success. Obviously, educational materials and resources have to be accessible as well since assistive technology only works if accessibility guidelines are observed.

Future developments

Will iPads and iPhones and their emerging apps replace today's dedicated devices, for example, CCTVs, Daisy players, calculators, light detectors, colour identifiers? They certainly seem to make a huge difference already and some now offer options that just a few years ago most of us thought would never be possible. Only the future will tell how technology is going to evolve. But it is important to consider what our students will need to learn to ensure that they are not excluded from full and equal participation in modern day education and society. How will the education of braille evolve, will hard copy, printed braille survive? Will the next generation fully rely on audio and e-books? I see braille as an essential and integral part of literacy for children who are blind and some who have low vision. Technology should not replace braille but support it. Braille should ride along too on the exciting road of future developments.

Need for support

Educators and parents need to be very much aware of new developments in technology and the vast opportunities these can offer children who are blind or have low vision. They should ensure that all students get equal access and equal opportunities. A shift to sufficient availability of appropriate tools, technology, skills, and resources will only be possible with the help and support of parents and educators, as well as with the support of the Queensland Government, Education Department and relevant organisations.

Need for change

Phia concluded her presentation by asking the delegates at the Queensland PD Day to help her realise this necessary shift. It was not her intention to spread discontent, to cause controversy or to blame anyone. Together, she said, we need to create a wave of change because technology is not a luxury, or something just for fun. It has quickly become an integral and essential part of each and every aspect of life. Educating students with vision impairment in technology, enables them to achieve great things and to reach their full potential in education, perhaps leading to a professional career, as well as in life.

This volume of our journal provides a smorgasbord of peer-reviewed research-based articles on such varied topics as the impact of Albinism on social information processing (Palmer), multisensory environments in Finland (Sirkkola & Pagliano), case studies of children with vision impairment entering primary school in New Zealand (Schishka), a study of the association between cerebral palsy and vision impairment (Crowle & Ravenscroft); the production of an expert-driven interview tool (Brown), and the development of a vision screening framework for the Solomon Islands (Silveira). In addition, an intensive review by Aiwa and Pagliano of professional literature focussing on the education of students with vision impairment in PNG, as well as an informative article by Trudy Smith on the development of an evaluation model for RIDBC Renwick Centre's Continuing & Professional Education program.

An 'Editor's Choice' section appears in this issue for the first time and provides two instructive articles, the first by Tim Connell on using accessible media and assistive technology to improve learning outcomes, and the second by Jodie Hoger on the changing paradigm in VET.

This issue is replete with reports from some of the leading organisations and programs in our field; for example, Victoria's celebrated Statewide Vision Resource Centre (SVRC) and the Australian Children's Vision Impairment Register, as well as Queensland's Narbethong Centre. There is a Tribute section that includes an obituary to SPEVI-NZ legend Tom Rogerson and records the several awards presented at our recent conference.

SPEVI over the years has received solid support from the two major technology specialist companies in our field: Humanware and Quantum, so that their advertisements appear in this issue by way of thanking them for the many things they've done and continue to do for us. Where would we be without them?

Providing specialised educational supports to students and young adults who are blind or vision impaired and living in isolated regions is a challenge in our vast country. It is my hope that future issues of JSPEVI might address this particularly complex issue. However, the authors in this issue provide a reasonably wide range of topics and a variety of perspectives. These constitute a core of sorts for the hard work that promotes change and evolution in a professional area concerned with the needs and expectations of its clientele in a rapidly progressing world.

Editor

Articles

Developing a Vision Screening Framework for the Solomon Islands - Sue Silveira

JAFF Research Fellow RIDBC Renwick Centre

Abstract

This article describes a project funded by the AusAID Avoidable Blindness Initiative and managed by the Royal Institute for Deaf and Blind Children, to develop a framework for childhood vision screening in the Solomon Islands. The project was twofold, firstly to design a vision screening framework which would be acceptable for local implementation; and secondly, to deliver a 'train the trainer' course to educate participants to eventually train Solomon Island health workers, to become competent childhood vision screeners. The challenges of education and delivery of health services in an environment of limited resources are discussed. A preliminary outcome from recent Solomon Islands childhood vision screening, conducted by the course participants is also presented.

Childhood vision screening is an essential frontline health service which positively contributes to the early detection of eye and vision problems. Vision screening is conducted usually between the ages of 4-6 years, during a child's visual development period, when problems can be managed to minimise the impact on the developing visual system. Eye and vision problems not treated in childhood can be difficult to remediate by the age of 8-10 years, and past this age will persist into adulthood (Clarke et al 2003).

During 2011 the Royal Institute for Deaf and Blind Children (RIDBC) participated in the project described below, which was funded by the AusAID Avoidable Blindness Initiative. The project targeted the Solomon Islands which had a fully functional eye clinic within Honiara Hospital, but no established community childhood vision screening program. The project brief was twofold, firstly to design a vision screening framework which could be successfully implemented in the Solomon Islands utilising locally available resources such as equipment, staff, space, and access to follow up ophthalmic care. And secondly, to deliver a 'train the trainer' course, to educate participants to eventually train Solomon Island health workers, to become competent childhood vision screeners. These health workers included Community Health Registered Nurses, Nurse Educators, Community Health Registered Nurse Aids and Community Based Rehabilitation workers. Two Honiara eye clinic nurses were sponsored for a week to participate in the 'train the trainer' course, hosted by RIDBC, in Sydney. Both nurses had qualifications and extensive clinical experience in ophthalmology, however they reported little experience in teaching nor awareness of pedagogical principles. Thus, the challenge was in the short period of time allocated, to support the nurses to be ready to roll out a vision screening framework for the

Solomon Islands including facilitating local area workshops, whilst also becoming competent vision screeners themselves.

'Train the Trainer' Course

The 'train the trainer' course was themed to ensure the nurses engaged in learning areas which would support their varied role in the project. The learning areas were divided into understanding learning and becoming a teacher, building a vision screening framework and developing competence in vision screening. The nurses were also encouraged to discuss adaptations to the content, to suggest effective ways to deliver key messages which would best meet local Solomon Island needs (WHO 2011).

Understanding Learning and Becoming a Teacher

The nurses did not have any formal teaching qualifications. As health professionals they had experience in patient education but expressed little understanding regarding the process of learning and the skill of teaching. To explore teaching and learning concepts a number of activities were conducted early in the course. The nurses were encouraged to examine their own knowledge and learning styles, and to consider teaching methods which could be implemented in the Solomon Island workshops.

Consideration of Culture

The issue of cultural norms and cultural appropriateness were raised early, to ensure the Solomon Island workshops would have local acceptance. The National Training Authority Guide for Working with Diversity which outlines useful standards and strategies for developing training for indigenous groups, was shared with the nurses.

Importance of Knowledge

It was reinforced to the nurses that they needed to be more than conversant with the subject matter, to ensure credibility with the trainees, to motivate them to be involved with the learning experience (Kroehnert 1990). Activities such as a quiz were included, which helped the nurses quickly identify their knowledge gaps, and to become aware of the essential core knowledge needed for childhood vision screening.

Teaching and Learning Experiences

The teaching and learning experience was examined in detail. A modified checklist as suggested by Chambers(2002) was used which included defining the purpose of the workshops; suitability of venues and managing attendance, being aware of the professional background and experience of trainees; how to structure a teaching session; how to demonstrate the skills involved in vision screening; ways to provide effective feedback; and how to manage a variable teaching environment, such as what to do when audiovisual resources such as PowerPoint weren't available.

The principles of adult learning were briefly explored, particularly how to encourage the learners to be reflective in their approach to their learning. To demonstrate, the nurses were asked to reflect on the 'train the trainer' course, to identify strategies that had supported teaching and their subsequent learning.

Building a Vision Screening Framework

It became obvious that the local situation in the Solomon Islands had the potential to impact on the success of childhood vision screening. The nurses were asked to identify both existing issues and resources within the context of the vision screening framework. These included:

Access to children, potential screening environments, staff, and equipment

Children in the Solomon Islands typically begin attending school at 5-6 years of age. Although vision screening at an earlier age is preferable, the school environment permits access to children by health professionals, under the supervision of teachers. Schools can usually provide a physical space in which to conduct vision screening, with minimal disruption and good lighting. Luckily the support of local Solomon Island education authorities had already been secured, with commitment to vision screening in schools, staffed by nurses employed by the local health authority.

Access to suitable vision screening equipment became a major issue. Validated vision screening tools currently used in Australian vision screening programs proved too costly. A vision screening tool was developed to comply with current Australian standards, using the principles of a linear vision chart, with letter recognition at a distance of six metres. The design was kept simple to allow for production in the Solomon Islands and consisted of vision screening cards, a matching card and a practice card. These cards were produced by photocopying originals onto A4 sized paper, which were laminated to permit cleaning, in a matt laminate to reduce glare. As access to photocopiers was possible in the Solomon Islands the vision screening kit could be easily reproduced, at a low cost locally.

A series of vision screening kits were made at RIDBC and subsequently sent to the Solomon Islands, to be distributed to the health professionals attending the vision screening training sessions. The kits included the vision screening tool, an eye patch, box of tissues and soap for hand washing and stickers for rewards for the children.

Referral criteria and a referral pathway for children who failed vision screening

Referral criteria were modelled on current Australian standards from the New South Wales state funded Statewide Eyesight Preschool Screening (StEPS) program. A referral pathway was established for children who failed vision screening. Families of these children were provided with a brief report indicating the outcome of their child's vision screen, and a recommendation that the child visit the eye clinic at Honiara Hospital for ophthalmic assessment.

Availability of ophthalmic follow up

Follow up ophthalmic care was already in place. Honiara Hospital is equipped with an eye clinic staffed by ophthalmic nurses and ophthalmologists who are able to conduct full ophthalmic evaluation and subsequent management of children who fail vision screening.

Data collection and reporting

Recording sheets were developed to be completed by health workers each time a child underwent vision screening. These recording sheets will be periodically submitted to the Honiara Hospital Vision Screening Coordinator who enters the results into a database. This data will be used to determine outcomes from vision screening such as the number of children screened and the number of children who failed. Of particular interest will be the children who have failed vision screening, who present to the Honiara eye clinic. Analysis will reveal if these children were found to have eye and vision problems.

Developing competence in vision screening

It was vital that the nurses became proficient in v1s10n screening to ensure integrity in teaching this skill in the Solomon Island workshops. Both the experience for the vision screener and the child being screened were reviewed. This included advice on:

- Gaining permission from schools and consent from parents
- Setting up the vision screening environment
- Identifying signs that a child might have an eye or vision problem
- Infection control during vision screening
- Explaining vision screening to the child
- Step by step of 'how to' vision screen
- Support for the child during vision screening
- Deciding on an outcome form vision screening

Two mornings of the 'train the trainer' course were dedicated to the nurses gaining experience in vision screening Australian children, using the new vision screening tool. This included setting up a suitable screening environment, conducting vision screening and reporting on the outcome. Forty Sydney based children of varying ages underwent vision screening by the nurses, using the new vision screening tool. The nurses successfully identified all children in the group who had some form of vision impairment.

Conclusion

Since returning to the Solomon Islands, the nurses have conducted two vision screening workshops for Solomon Island health workers. The first was held in Honiara City Council, training two groups, with a total of 29 health workers attending.

The second workshop was held in Guadalcanal Province with 51 health workers attending. The workshops were delivered with a blend of face-to-face and supervised vision screening days. To date the health workers have gone on to screen 845 Solomon Island school children. Plans are in place to monitor the outcomes of the children referred to the Honiara Hospital, to determine the number of children positively identified with an eye or vision issue.

Participation in this project has proven challenging and rewarding. It has been a privilege to work with the two dedicated, highly skilled Solomon Island nurses who were adventurous learners, with a passion for helping the local children and their families. It will be satisfying to watch as the team of trained Solomon Island health workers impact positively on the early identification of childhood vision impairment through vision screening, giving local children the opportunity for vision for life.

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A comparative case study of two boys with vision impairment starting primary school in New Zealand - Janice M. Schischka Ph. D

University of Auckland

Abstract

This is a case study of the transition to primary school for two boys with vision impairment in New Zealand. Two aspects were investigated. Three standardised survey instruments were used to measure the children's relationships with parents, teachers, teacher aides, and classmates. Parental and teacher interviews were used to examine the factors occurring before and after school entry. Results showed the two boys had vastly differing transition experiences. Their individual characteristics appear to have impacted on their school relationships, and the transition practices appearing to be most worthwhile were high levels of communication and collaboration between family and school throughout the transition. This study concludes that the most critical factors for these two boys were the home-school partnership and their personal characteristics.

For most children, starting school marks a major milestone in their short lives (Newman, 1996). There is increasing evidence that a positive start to school sets the child up for continued positive educational experiences and future life opportunities (Dockett & Perry, 2007). In addition, Pianta and Walsh (1996) describe the early school years as a sensitive period, defined as a period when the window of opportunity for influencing later outcomes is open and in which experiences will have disproportionate influence. For many children, starting school may prove to be positive and exciting, while for others, it can be challenging and disconcerting and, for the families of children with disabilities, starting school may prove to be stressful and difficult. Thus, it is important to investigate the practices and processes involved in school transitions for young children with disabilities.

The family as a social system impacts on the child and his or her transition to school, but the parent-child relationship probably has the greatest influence (Barth & Parke, 1996). Thus, the first purpose of this study was to assess children's attachment with parents and their relationships with teachers, teacher aides, and peers at school. Bowlby (1969 /1982) developed the concept of attachment to explain the role that interactions with significant others play in the child's future development. Bowlby asserted that, during the first year of life, children develop enduring and specific relationships with their primary caregivers, who are generally the mother and father, and this is known as attachment. Researchers (Wartner, Grossmann, Fremmer-Bombik, & Suess, 1994) have found a high level of concordance between infant attachment classifications and attachment patterns in six-year-olds. A large body of evidence has accumulated suggesting that a child's attachment type, as assessed in infancy, may have an enduring influence right throughout early and middle childhood, and even into adolescence (Carlson, 1998; Howes, Matheson, & Hamilton, 1994).

A considerable body of research has assessed attachment security in children with disabilities, especially in discrete disability groups (Macrae, 2002; Willemsen-Swinkels, Bakermans-Kranenburg, Buitelaar, Van Ijzendoorn, & Van Engeland, 2000). In general, these studies found greater proportions of attachment insecurity when comparisons were made with children without disabilities (Ganiban, Barnett, & Cicchetti, 2000; Naber et al., 2007). Children with vision impairment are at greater risk of attachment insecurity in that the infant with low vision may not be able to obtain the eye- to-eye contact that is critical in the formation of attachment relationships (Schore, 1994, cited in Hatton, McWilliam, & Winton, 2002). In addition, the infant with a vision impairment may display adaptive behaviours that can be misinterpreted by attachment figures, such as remaining quiet to better hear sound cues (Hatton et al., 2002). Macrae (2002) found a greater proportion of attachment insecurity in his sample of blind infants when comparisons were made with normative samples.

Children's inter-personal relationships may serve a number of functions that will either enhance or impede their adaptation to new environments (Ladd, 1996). During the process of school transition, children's relationships may act as either supports or stressors, or both, and may exert an influence on their ability to cope (Ladd). Based on Bowlby's (1973) concept of inner working models, Cohn (1990) argued that individual differences in the quality of attachment relationships formed with parents can be related to social relationships extra-mural to the family, such as relationships with teachers and peers.

Children with disabilities have been shown to have poorer social skills, poorer peer interactions or peer relationship than children without disabilities (e.g., Wiener, 2004; Ye Zhang, & Yan, 2005). For social interactions to occur, young children must possess the requisite social competence to enter and sustain their interactions, and familiarity with peers increases overall social interactions (Sainato, Jung, Salmon & Axe, 2008). Children with vision impairment can recognise auditory cues, such as an affectionate tone of voice, but may not be able to see social signals or to observe affectionate facial expressions and gestures in others (Compton & Niemeyer, 1994). They may therefore be less likely to engage in social interactions with adults and classmates, putting their teacher and peer relationships at risk.

Studies have consistently shown an association between child-parent attachment and child-teacher relationships in typically developing children at preschool or school (De Mulder, Denham, Schmidt, & Mitchell, 2000) and between child-parent attachment and child-peer relationships in early and middle childhood (Moss, Parent, Gosselin, Rousseau, & St Laurent, 1996). Howes and colleagues (Howes, Hamilton, & Matheson, 1994; Howes, Matheson, et al., 1994) examined the association between child-mother attachment and relationships at preschool with teachers and peers. These authors found no association between child-parent attachment and peer relationships but found that child mother attachment predicted relationships with

teachers that in turn, predicted relationships with peers. Finally, studies have concurrently examined children's attachment with parents and their adjustment to school in terms of their relationships with teachers and peers in samples of typically-developing children (Cohn, 1990; Granot & Mayseless, 2001). Cohn (1990) found that insecurely attached boys had poorer teacher and peer relationships than securely attached boys, although there were no similar finding for girls. Granot and Mayseless (2001) found that secure children showed better adjustment to school as reflected by teacher reports, as well as in peer-rated social status. However, these studies have all been conducted in typically developing samples and, to date, no similar research appears to have been conducted on children with disabilities.

The second purpose of this study was to investigate retrospectively the factors and processes that had occurred during the period immediately before and after the children entered primary school. Some of the factors found to be most important for school transitions for young children with disabilities include careful preparation and planning (Conn- Powers, Ross-Allen, & Holburn, 1990) and the assembling of a team of personnel and the holding of meetings to coordinate the transition (La Paro, Pianta, & Cox, 2000; Newman, 1996). Carlson and her colleagues (2009) found that parental and teacher reports on the ease of transition varied according to whether the school-initiated actions to facilitate the transition, and on how much support was available for teachers. Others have recognised the need for parental involvement (U.S. Department of Education, 2001), and Wartmann (2000) recommended that families be involved in the decision-making. One of the practices found to be most successful by families was pre-entry visits to the new school (Blundell, 1998). Some authors (Wartmann, 2000) suggest that children with disabilities might need longer to become familiar with classroom routines and the school environment before they start. Furthermore, Fenlon (2005) and Bourne (2007) recognised the need for ongoing communication and collaboration between the child's family, preschool, school, and all other professionals involved in the child's life.

Learners who are blind or vision-impaired have the same basic needs as all students, to be accepted, to have friends, and to be included in the school's activities (Nagel, 2005). These students are able to do most of the things that their sighted peers do and will want to be part of the class and of activities throughout the school (Nagel). It is, therefore, important to investigate the processes involved in school transitions for young children with vision impairment, and this study intended to examine the transition experiences of two boys with vision impairment in their first year at primary school.

Methods

Research design

The present study used a multiple case study approach and reports the cases of two boys with vision impairment alone. A multiple case study enables the researcher to

explore differences within and between cases (Baxter & Jack, 2008). The current study is taken from the results of a larger study on the transition to school for young children with disabilities which used a mixed method design. Three standardised, survey instruments were used to measure the target children's relationships with their parents, their teachers and teacher aides, and their peers. Additionally, semi-structured interviews were used to interview parents, teachers, and teacher aides about the children's transition to school.

Participants

Participants in this case study were two boys with vision impairment (registered members of the Royal New Zealand Foundation of the Blind) in their first year at school in New Zealand. (More details of the children's characteristics are provided in the case studies below). Both boys had attended early childhood centres prior to school, and both were fully included in regular classes. The study also involved one of each child's parents and their New Entrant/Year One teacher. In Seth's case, as he had a teacher aide working with him, she also participated in the study.

Sampling Procedure

The participants were chosen by purposive sampling, a process used when participants are selected because of some particular characteristic (Patton, 1990). The study began by first obtaining approval from the University of Auckland Human Participants Ethics Committee. Participants were recruited by contacting New Zealand's Vision Education Agency (VEA). The researcher was not granted direct access to the confidential records of this agency; rather, the agency identified suitable participants on behalf of the researcher. To assist with this, VEA was given a set of criteria that included the requirements for participants of being educated in regular classes on a full-time basis and being in their first year at school. Once suitable participants were approved by the researcher, their families were contacted and invited to participate. After the families had given their consent, their schools were contacted and consent was then negotiated with the target school to approach the child's classroom teacher, the teacher aide if the child should have one, and the parents of the target child's classmates.

Procedure

The study consisted of two phases. In Phase One, two visits were made to the child's home about two to four days apart, each visit lasting about one hour. At the first visit, the parent was interviewed and then performed the first stage of the Attachment Q-Sort (AQS; Vaughn & Waters, 1990). During the period between visits, parents were asked to observe their child's behaviour on the basis of the AQS items. On the second visit, the second stage of the AQS was performed. Parents were fully supported by the researcher during both stages of the AQS procedure.

In Phase Two, the researcher visited the target schools and interviewed the teachers and teacher aides. These professionals were then asked to complete the Student-Teacher Relationship Scale (STRS; Pianta, 2001). This took approximately 10 minutes to complete. During the same day, the target child's classmates performed the peer sociometric measure (PSM) to assess their relationships with the target child. This measure commenced at the beginning of the school day and was conducted during class time, fitting around the children's breaks for morning interval and lunchtime. Only those children who returned consents signed by parents participated in the PSM. Each participating child was removed from the classroom and taken to a small vacant room nearby to perform the PSM. The children's answers were recorded in a book. Once each child had performed the PSM, they were returned to their classroom. The entire process took each child no longer than five minutes to perform.

Instruments

To assess children's attachment to parents, the Attachment Q-Sort (AQS; Vaughn & Waters, 1990) was used. This procedure can be used with children of a broad age range and those with disabilities (Van Ijzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven, 2004). The AQS is a standard Q-set containing 90 items, with each item of behaviour printed on a separate card. The items focus on attachment-related behaviours. In the present study, as parents themselves were to administer the AQS, the wording of each item-card was adapted in advance by the researcher. For example, the item 'Child readily shares with mother or lets her hold things if she asks to' became 'my child readily shares with me or lets me hold things if I ask to'. The AQS is a forced distribution task, and the items were rank ordered by the parent from least characteristic to most characteristic of the child across the two stages of the AQS procedure. Thus, the AQS does not categorise children into attachment classifications; it produces security and dependency scores ranging along a continuum.

Van Ijzendoorn and colleagues (2004) found that the AQS has convergent, predictive, and discriminant validity when administered by trained observers. Agreement between the parent- and observer-administered AQS has been demonstrated to be significant but moderate (Cassibba, Van Ijzendoorn, & D'Odorico, 2000; Teti & McGourty, 1996). Additionally, test-retest reliability and inter-observer agreement have been found to be satisfactory (Cassibba et al., 2000).

To assess children's relationships with teachers and teacher aides, the Student-Teacher Relationship Scale (STRS; Pianta, 2001) was used. The scale is a self-report measure which is designed to assess a teacher's perceptions of his or her relationship with a particular child. It has been normed on over 1500 children and over 270 teachers in the United States and is suitable for children aged from four through eight years (Pianta, 2001). It scale has demonstrated adequate validity and

reliability (Pianta, Steinberg, & Rollins, 1995) and consists of 28-items with three subscales: Conflict, Closeness, and Dependency. The items are derived from attachment theory, the AQS, and a review of the literature on teacher-child interactions (Pianta, 2001). The Conflict subscale measures the degree to which a teacher perceives his or her relationship with a particular child as conflictual (Pianta, 2001), with such items as 'This child and I always seem to be struggling with each other'. The Closeness subscale measures the extent to which a teacher experiences open communication, warmth, and affection in the relationship and an example is 'I share an affectionate, warm relationship with this student'. Finally, the Dependency subscale assesses the extent to which a teacher perceives his or her relationship with a child as inappropriately dependent and includes items such as 'This child is overly dependent on me'. In addition to the three subscale scores, an overall score was generated.

To assess each child's relationships with his or her classmates, a peer sociometric measure (PSM) was used as per Asher and Dodge (1986). This measure has proved to be highly stable over time and has been validated by other studies (Granot & Mayseless, 2001). The purpose of Asher and Dodge's PSM was to assess the sociometric status of every child in a given class via the combination of a positive nomination technique (PNT) with a liking rating scale (LRS). Conversely, the purpose of the present study was not to categorise whole classes but, rather, to ascertain each target child's relationships with his or her peers. Thus, the PNT was used to assess how frequently the target child was nominated as 'most liked' by his or her classmates, while the LRS was to determine how much other children liked to play with the target child in relation to the rest of the class.

For the PNT, each participating child was asked to give the names of the three children in their class they liked the most, and they were permitted to name just three classmates of either sex. For the LRS, each child was asked to rate every other student in his or her class on a Likert-type scale as to how much they liked to play with that classmate. To do this, the child was shown a photograph of every child in his or her class and asked: 'Some children like to play with him/ her, some children don't. What about you?' According to the child's answers, a number from one to five (as in a Likert scale) was allocated for each classmate.

To interview parents, teachers, and teacher aides, a semi- structured interview schedule was used (see Appendices A and B). Interview questions were designed for the specific purpose by the researcher. All interviews were recorded with an audio-recorder.

Data scoring and analysis

For the AQS, the scores for the 90 AQS items for each target child reflected the pile numbers in which they had been placed by the parents. A criterion-sort correlation was conducted through which each child's AQS scores were compared with the

scores of the hypothetically most secure child on the constructs of security and dependency. For this purpose, a Spearman non-parametric correlation was used. Its use produced security and dependency scores for each child that ranged along a continuum. For the security scores, .3 was used as a cut-off between security and insecurity of attachment, while statistical significance was used to determine extremes of dependency.

For the STRS, raw scores were calculated for each subscale; Conflict, Closeness, and Dependency as per Pianta (2001). These scores were then aggregated to produce an STRS total raw score. The four raw scores were then converted to percentiles using the Total Normative Sample Conversion Table (see Pianta, 2001). To interpret the STRS for each child-teacher or child-teacher aide relationship, the percentiles were examined in the four aspects. Percentiles were categorised as high, medium or low by comparing the percentile to the figures obtained when the instrument was normed. Under the Conflict and Dependency subscales, if a particular child's percentile scored above the 75th, this was regarded a extremely high. For the Closeness subscale and the total scale, if a particular student's percentile fell below the 25th, this was regarded as critically low and an area of high concern.

For the PSM, the PNT was analysed by simply adding the number of positive nominations received in a given class and, in particular, the number received by the target child in that class. The LRS was analysed by calculating mean liking peer ratings of all the children in a class. Using the class mean ratings and standard deviations, and the target children's mean ratings, Z scores were calculated for each target child. If a child's Z score was more than one standard deviation above their class mean, the child was regarded as having very positive peer relationships. If the child had a Z score within the range of plus or minus one standard deviation of their class mean, this indicated that the child had positive relationships with peers. Finally, if a child had a Z score more than one standard deviation below their class mean, he or she was regarded as having poor peer relationships.

Parental, teacher, and teacher aide interviews were coded according to themes. They were then analysed to examine for patterns of consistency or difference.

The Case Studies

Seth

Seth was a Caucasian male aged five years six months. He was the younger of two children with an older sister, living in an intact nuclear family. Both parents worked as professionals and the family lived in an urban area. Seth had been at school for approximately six months at the time of this research, attending his local public primary school. Seth's mother was the parent who participated in this research.

Seth's vision impairment was that he was born with bilateral cataracts which were widespread and dense. Following surgery to correct the cataracts, his eye pressures were raised with glaucoma. This condition persisted throughout the first five and a half years of life, resulting in approximately 30 rounds of surgery and general anaesthetics, and Seth's sight was now at risk. He was a dual literacy learner in that he was learning to read in both Braille and large print. Resources to support this child in the classroom included a teacher aide who worked with him five mornings a week, a Brailler and a closed-circuit television (CCTV). Seth was in a reading group of three children who all gathered around and read from his CCTV at reading time.

Seth's vision impairment was first diagnosed as a baby, and the possible implications of this were recognised while he was still just an infant. His parents had chosen to expose Seth to as many rich background experiences as possible, to build up his visual library in case he should lose his sight altogether, to foster his social skills, and to develop his self-esteem and independence. Now, as a five-year-old, Seth participated in several out-of-school activities, including soccer and judo. He frequently had friends' home to play after school and these friends often returned the invitation to Seth.

Seth's teacher and teacher aide created a picture of a lovely child who was a delight to teach. He was described as confident, compliant, independent, polite, and smiley. In her interview, the opening comment from his teacher was: 'I really enjoy having Seth in my class. He's just a breath of fresh air most of the time; he's so confident and happy. He's a really nice kid to have around, and he's very helpful with the other children. And he doesn't seem to let his disability affect him or bring him down in any way. He's just like a regular child in the classroom'. His teacher aide commented 'How can you not like a child that smiles all the time?'

In the three standardised measures used to assess Seth's relationships with his mother, teacher and teacher aide, and classmates, Seth scored quite highly. In the AQS, he was found to be securely attached with his mother. In the STRS, Seth was found to have a very favourable relationship with his teacher and teacher aide, with low conflict and dependency, high closeness, and a high overall score. In the PSM, he was also found to have very positive relationships with his peers, with a high Z score and many positive nominations as 'most liked' in the class.

In her interview, Seth's teacher described his peer relationships. Seth had formed close friendships with a small group of boys who were now very good buddies with him. His mother commented that, after starting school, he had quickly teamed up with another boy named Frank, and they as parents had wondered if this was a 'smart survival mechanism' in order for a child with low vision to survive in the school environment. Seth's teacher and aide reported that the other children were aware of his low vision, although were not familiar with the details, and were quite empathic and supportive with him. Although he was quite an independent child who did not like

'a lot of attention in that way', if he was having any difficulties, his close friends would quietly go along and help him in such a way that he did not really notice. His teacher continued on by saying that Seth did not really need helping because of his disability; in fact, it was Seth who helped other children because he had been in the class longer and was more familiar with the classroom rules and routines.

Apparently, when it was news-sharing time, Seth loved to share his experiences with his classmates, and would engage in this activity with excitement, energy, and confidence. Because of these qualities, he was also good at bringing things out of the other children. It was reported that Seth never became aggressive or hostile with his classmates, nor did he act in a shy or withdrawn manner with them. Other qualities that Seth's teacher reported were that he was a very good listener and was good at taking instructions on board, and she believed that this listening skill had developed as a result of his low vision.

In Seth's school transition, the two factors that appear to have been most valuable and worthwhile for his family were, first, participating in a pre-entry meeting to plan his transition and, second, being able to take Seth on multiple visits to school prior to him starting. The transition meeting had involved the Resource Teacher - Vision (RTV)[1], one of his early childhood teachers, an Assistant Principal in charge of special needs and the New Entrant/Year One teacher from the primary school, Seth, and his mother. This meeting had occurred at the school some six weeks before he transitioned. One of the significant outcomes of this meeting was that professionals believed that Seth would benefit from more than the usual number of pre-entry school visits to familiarise him with the school environment and classroom routines. Thus, Seth was permitted six visits in contrast to the usual number of two allowed for other transitioning children. These occurred over the four weeks immediately prior to him starting, and occurred at different times of the school day, including lunchtimes, so that by the time Seth started, he had practically done a whole day.

Interviews with Seth's mother and teacher revealed a strong sense of good levels of interaction and communication between his parents and teacher, and of family and school working together in a collaborative team effort to better meet his needs. For example, his teacher reported that she was inexperienced in working with children with disabilities but commented that Seth's mother had been a fantastic help and support to her, and she could ask her even the silliest little things, and his mother would help her to understand what was needed. Another example can be seen in the complementary strategies employed in the classroom situation by both mother and teacher. When Seth and his mother walked into the classroom at the beginning of the school day, Seth tended to look around uncertainly for his teacher, so her strategy was to call out to him 'Hi Seth' rather than waiting for him to greet her. This

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[1] Resource Teachers – Vision (TRV) are itinerant teachers who are mainly responsible for developing and implementing the special education program. They are advocates for and facilitators of appropriate education for learners who are blind low vision (Nagel, 2005).

would assist Seth to orientate towards her. Similarly, when his mother arrived to collect him at the end of the school day, Seth's teacher would say 'Seth, there's Mum', and his mother would call out 'Hi Seth', which would again guide him off in her direction. Finally, Seth's mother described how accepting and accommodating the school had been in attempting to meet his needs, reporting how they had all worked together collaboratively when problems had arisen.

Jacob

Jacob was a Caucasian male aged six years exactly. He was the younger of two children with an older sister living in an intact nuclear family, although his father had two grown-up sons from another relationship living elsewhere. Jacob's father was retired, his mother was a blue-collar worker, and they lived in a small rural town. He attended a private Christian school some 40 minutes' drive from their home, and this had the full range of levels from early childhood to a tertiary college. Jacob had been at school approximately three terms at the time of this research and had no teacher aide. As his father was retired and his mother worked, it was his father who participated in this research.

Jacob's vision impairment resulted from hypermetropia, also known as hyperopia or far-sightedness. Thus, his near vision was much lower than his distance vision. It appears that Jacob's vision impairment was not picked up until he was around four years of age, and there seems to have been some lapse in time between the diagnosis and the fitting of glasses. During this time, Jacob was moved from a public early childhood centre to the preschool of his private school. His low vision and, in particular, his lack of near-sightedness, the belated diagnosis of his vision impairment, and the delayed fitting of corrective glasses all appear to have impacted on his school transition.

First, Jacob's father and teacher concurred when describing him as a very non-smiley child who always wore a blank, expressionless face. Both interviewees believed that he was unable to read either the facial expressions or body language of others, and this appears to have affected his ability to display his own emotions through his facial expressions. In addition, Jacob's teacher described him as a rather distant, unaffectionate child. She described her own manner with this child as warm and affectionate but felt frustrated that she never seemed to receive any feedback from Jacob in return, such as a warm smile when she praised him.

Second, Jacob's low vision and the delay in the fitting of his glasses seem to have had implications in shaping the nature of his interactions with his peers. The developmental history suggests that the acquisition of his glasses did not occur until sometime after he started attending the private preschool. The peers who attended the preschool with Jacob subsequently transitioned to the primary school with him and were now his classmates. Jacob's teacher described a pattern of interactions with peers that appears to have begun at preschool with Jacob, unable to see his

classmates, approaching them and getting right up to their faces. Because he was within their personal space, they would react by pushing him away, and Jacob would respond by pushing back. His teacher now saw his behaviour in a negative light, describing him as 'aggressive and hostile' with other children. Jacob's father described him as 'a very strong little individual' and, as he had older half-brothers who often engaged in rough house play with him, this appears to have impacted on his ability to interact positively with his peers. Jacob's teacher reported '…That's fine, that's what boys do. But Jacob then struggles to engage in play that's appropriate physically to the same level as the other children of this age, so that could also be another factor'. She described several incidents where Jacob had bullied other children and, when she had attempted to talk with him about these incidents, his response had been to lie.

On the other hand, Jacob's father created a picture of a boy who was himself the victim of bullying. The bullying seems to have been related to Jacob acquiring his new glasses while still in preschool. Jacob's father described a number of incidents where his glasses had been snatched off Jacob and bent, scratched, or broken, and these incidents were occurring on the school bus about once a fortnight. This would mean that Jacob would be without his glasses for a couple of days while they were being repaired, until the family felt it was necessary to talk with the school about this matter.

Thus, a certain pattern of interactions with other children seems to have begun and become firmly established while Jacob was still just a preschooler, and this pattern appears to have carried over to affect his peer relationships at school. In her interview, Jacob's teacher said '…because it's not actually his fault that these things have happened, but there is a perpetuation that he has to be responsible for his part and the other children have to be responsible for perpetuating for their part'. She also acknowledged that some of what was happening may have been due to his vision impairment. '.... but more often, it seems to be a misinterpretation of what the other child is doing, and he will react, thinking it's an affront to him, and hit or hurt or pinch the other child. But it's a misinterpretation. He's misread or misunderstood the cues'. Jacob's teacher also reported that some of the parents of his classmates had approached her to request that Jacob be kept away from their children.

In the AQS, Jacob was found to be securely attached with his father. The results from the STRS and the PSM tended to confirm the interview data. In the STRS performed by his teacher, Jacob scored extremely high in conflict and extremely low in closeness, dependency, and the overall score, thus determining a rather negative teacher-child relationship. In the PSM, he received no positive nominations as 'best friend' and his liking Z score was significantly below his class mean, indicating very poor relationships with his classmates.

When Jacob transitioned from preschool to school, some of the processes that had occurred for Seth were absent for Jacob. For example, Jacob and his family had no transition meeting. When his vision impairment was first diagnosed while he was still at preschool, Jacob's family met with the school's teacher responsible for special needs. As it was approaching time for him to enter school, the special needs teacher discussed his vision impairment with the New Entrant/Year One teacher. Additionally, Jacob was permitted no more than the usual number of pre-entry school visits than was granted to other transitioning children, that is, once he was taken on this visit by the preschool staff with no participation from his family.

Furthermore, the high level of interaction between family and school since the transition that occurred for Seth seems to have been absent for Jacob. When his father was asked how much contact they as a family had with the school to meet Jacob's needs, his response was: 'the school encourages it far more than we actually participate'. He then went on to say that they preferred to 'stand back and let the school get on with it', and to 'go the extra mile and put in extra effort at home with the homework'. This situation was confirmed by Jacob's teacher, who reported that she had tried to encourage this family to interact with the school as much as possible to discuss any problems, but they had not really taken up the offer.

Discussion

Both Seth and Jacob possessed individual characteristics that appear to have influenced the nature of their interactions and relationships with their teachers and peers, and this seems to have ultimately impacted on their transition to school. In Seth's case, his characteristics appear to have endeared him to others at school and have enabled them to respond to and engage with him in positive ways. It is possible that this has led to favourable teacher, teacher aide, and peer relationships. Contributing to this may have been Seth's frequent invitations to and from peers to play after school. Research has indicated the need for young children with vision impairment to be provided with opportunities to interact with other children (e.g., Compton & Niemeyer, 1994).

In Jacob's case, it appears that he possessed characteristics or behaviours that may have interfered with his ongoing social interactions with others at school. These may have led to less than favourable teacher and peer relationships. For example, Jacob was described by both his father and teacher as non-smiley and seemingly unable to read either the facial expressions or body language of others. Compton and Niemeyer (1994) indicated the importance of smiling in interactions with peers and with extra-familial adults, and for building positive relationships with peers and teachers. These authors showed that children with vision impairments may be unable to observe affectionate facial expressions or behaviours, such as smiling and, therefore, may not themselves understand how to appropriately exhibit these behaviours. Because child-caregiver affection is a precursor of child-child affection

and interaction, it could be suggested that young children with sensory impairments are at greater risk of negative patterns of child-peer affection and interaction (Compton & Niemeyer, 1994).

However, Seth was also vision-impaired and yet was described as a very smiley child. This difference between the two boys may have been due to Jacob's lack of near- sightedness and the delay in the diagnosis of his vision impairment, whereas Seth had had an early diagnosis, and his near vision and therefore also his ability to read the facial expressions of others were apparently quite good. Additionally, Jacob's teacher reported that his rough house play with his older half-brothers had resulted in his inability to engage appropriately in play at the same level as his age-mates. The rough-and-tumble of children's play, especially among boys, can quickly turn to aggression (Townsend, 1992).

Child characteristics such as temperament have been shown to impact on children's adjustment to school (Al-Yagon, 2003). Carlson and her colleagues (2009) found that the ease of transition to school for children with disabilities varied according to child characteristics. These characteristics were also found to impact on the attitudes of non-disabled children to accepting their classmates with disabilities (Siperstein & Bak, 1986).

It appears that, for Jacob, a certain developmental history has occurred. Developmental history affects the interactions of individuals with others and, in turn, influences their relationships (Pianta, 1999). Pianta also said that relationships embody features of the individuals involved, including personality traits and biologically pre-disposed characteristics such as temperament. Jacob seemed to possess personality traits that appear to have played a role in his interactions. However, it is also possible that those with whom he was interacting may have possessed characteristics to contribute to this situation. Pianta (1999) says that relationships also include feedback processes, the purpose of which is to exchange information between the individuals, whether this be behavioural interactions or language and communication.

Other factors may have contributed to the success of the school transition for Seth, and the lack of success of Jacob's transition. Many of the processes that occurred for Seth and his parents were absent for Jacob and his family. For example, the high levels of communication and collaboration between Seth's family and school have been beneficial to his smooth transition (see also Bourne, 2007; Fenlon, 2005). This began before school entry with the holding of a meeting to plan and coordinate Seth's transition (see also Blundell, 1998). Additionally, Seth was provided with multiple opportunities to visit his new school prior to school entry (see also Bourne, 2007; Fenlon, 2005). Children with disabilities may need longer to become familiar with both classroom routines and the school environment (Wartrnann, 2000). Furthermore, for Seth, the levels of interaction and collaboration between his family

and school appear to have been sustained following school entry, and this seems to have aided in meeting his needs.

For Jacob, the levels of communication and collaboration between his family and school both before and after school entry seem to have been quite minimal. Prior to school entry, the lack of family participation in a transition meeting and in extra school visits appears to have denied his family several opportunities to have some input. Following school entry, the lack of family-school interaction has continued. It is possible that this dearth of interaction may have been due to the long travelling distance between home and school. However, this situation seems to have contributed to a low level of collaboration and communication between school and family.

It is not clear why Jacob was not given the same transition opportunities as Seth. It must be remembered that the transition of these two boys occurred in two different contexts. Whereas Jacob transitioned from preschool to primary at the same private school, Seth's transition was into a public school, and this may partially explain the different approaches of these two schools. However, this alone is an insufficient explanation for such widely differing transition experiences.

Implications for practice

In order to address concerns about children's behaviour, one of the most appropriate approaches could be intervention, and this can happen at both the home and school levels. Early intervention, such as emotional support for families and effective home visits, may be necessary for children with vision impairment (Hatton et al., 2002). McCollum and Ostrosky (2008) argued that children with disabilities may need greater assistance from family members to develop interactions and friendships with peers outside the family, as limited experience with peers almost certainly affects social competence. Interventions with children with vision impairment need to take into account the fact that these children may not perceive visual cues about the feelings and intentions of others, and therefore may need to be told about what they cannot see (Campbell, 2007). Interventions in child behaviour may also need to take place at school.

In terms of transition practices, the holding of meetings to plan and coordinate the transition, to which a whole team of personnel is invited, including the child and their family, would appear to be important for all children with disabilities. Additionally, children with vision impairment may need longer to become acquainted with the classroom rules and routines, as well as with the school environment, and this may necessitate several visits to the new school prior to starting. Finally, ensuring high levels of sustained communication and collaboration between family and school would appear to be essential for the success of school transitions for all children with disabilities.

Conclusion

This paper presents the case studies of two boys with vision impairment starting primary school in New Zealand. Their school transition experiences could be said to be like the two faces of the same co.in. For both Seth and Jacob, individual characteristics appear to have played a role in influencing the nature of their relationships at school. As for transition practices and processes, the most critical factor would appear to be the levels of communication and collaboration between home and school. In Seth's case, the presence of transition practices would appear to have contributed to the success of his school transition, and this is supported by other literature. In Jacob's case, the absence of such processes appears to have contributed to the lack of success of his school transition. Nevertheless, it is argued here that Jacob's case study supports the main argument in that, if these practices and processes had occurred for Jacob, his transition to school may have been more successful. However, it must be remembered that this is just two case studies, and, on this basis, it would be difficult to draw generalizations about the transition to primary school for young children with vision impairment.

Although the vision impairment of these two boys varied, it could be argued that their requirements for starting school were very similar. While it is widely acknowledged that students who are blind or low vision have unique educational and developmental requirements, they have the same educational needs as their sighted peers, and the goals for their education should be the same as for all other learners (Nagel, 2005).

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Appendix A: Interview Questions for Parents

1. Can you tell me a little bit about your child?
2. How did you feel upon learning the diagnosis of …'s (child's name) special needs?
3. Did he/she attend some form of early childhood centre prior to starting school?
4. How well did that work for you? Was that a good experience for you, and for your child?
5. Tell me about (child's name)'s first day at school. How did it go?
6. Did you do any particular preparation to get him/her ready for starting school? What kinds of things did you do?
7. Did you have any fears or concerns about your child starting school prior to his or her school entry? If so, what were they?
8. Did you get any opportunities to meet with and talk with either the new teacher or school principal before he or she started school? If so, what did you discuss with them?
9. Did you encounter any problems or difficulties after he/she started? If so, what were they?
10. Do you have any issues with the school and the way they are managing your child's special needs?
11. How much contact or interaction do you have with the school, particularly in order to meet your child's special needs?
12. Tell me about your child's relationship with his/her teacher. How would you describe it?
13. How would you describe your child's relationship with his/ her teacher aide?
14. Do you have a sense of how your child is fitting in and adjusting to the classroom in terms of their relationships with the other children?

Appendix B: Interview Questions for Teachers

* Questions that were also asked of teacher aides

1. How do you enjoy working with …. (child's name)? *
2. Do you think the other children in this class are aware of his/her special needs? *
3. Do you find some children in your class to be quite empathic or supportive of this child? If so, which ones? *
4. In the classroom work situation, are there some children who are quite comfortable about working with this child? If so, which children? *
5. Do you find some children in your class are happy to talk with and share experiences with him/her? If so, which ones? *
6. Do you find some children are happy to play with this child, either in the classroom or in the playground? If so, which ones? *
7. Are there ever any occasions when s/he becomes aggressive or hostile towards other children in the class? If so, is this directed towards certain children? *
8. Does he/she ever act in a shy or withdrawn manner with the other children? If so, which ones? *
9. If you could think back to the time before this child entered your class, were you made aware of his/her special needs prior to his/her entry? How were you made aware?
10. Did you have any FEARS OR concerns about working with him/her prior to his/her entry? If so, what were they?
11. Once (child's name) entered your class and got settled in, did you encounter any problems or difficulties having him/ her in your class? If so, what were they?
12. Were they problems that you had anticipated beforehand, or did you experience these difficulties after he/she started in your class?
13. Did you have to make any adaptations to your classroom environment to cater for HIS/HER special needs? If so, what were they?
14. Did you have to make any adaptations to your programme or curriculum to cater for HIS/HER special needs? If so, what were they?
15. Do you have the same expectations of him/her in terms of his/her behaviour as you do of the other children in the class?
16. Do you have the same expectations in terms of his/her learning as you do of the other children in the class?
17. How would you describe your relationship with this child? *
18. How would you describe this child's relationship with his/ her teacher aide?
19. How would you describe this child's relationship with his/ her teacher? *

Author Note

Correspondence should be addressed to Janice Schischka, Faculty of Education, the University of Auckland, Private Bag 92 601, Symonds St, Auckland, New Zealand.

Email: j.schischka@xtra.co.nz
Ph: +64 9 521 6550

Social information processing: The impact of Albinism - Carolyn Palmer PhD

Flinders University of South Australia School of Education

Abstract

This article presents a study of the social ability of a small group of students with albinism. Two aspects were investigated: students' level of social information processing and their ability to interpret social cues appropriately in various situations. Data was gathered from parent and teacher interviews and three aspects of the Social Emotional Dimensional (SEDS) questionnaire which was used to measure teachers' perceptions of students' social understanding and social behaviour. The findings revealed that the most obvious aspects of social ability that were of concern were social information processing and the likelihood that children with albinism, as reflected in this study, may say and do inappropriate things and show inappropriate feelings.

Keywords: Albinism; vision impairment; social understanding, social information processing, social cognition; social competence.

Introduction

Albinism refers to a group of congenital and inherited conditions, that are characterised by a congenital deficiency of pigment (congenital hypopigmentation) that affects all ethnic groups (Thompson & Thompson 2007). Albinism results from the body's inability to produce normal amounts of melanin (pigment). As a result of reduced or lack of pigment, people with albinism have poor vision because the macula in their eyes does not develop normally.

Albinism is characterised by a cluster of ocular features. These generally include horizontal nystagmus, foveal hypoplasia, photophobia, lack of macular pigmentation (Yo, Wilson, Mets, & Ritacco, 1989), ametropia and strabismus, high refractive errors, and astigmatism (Abadi & Pascal, 1989). Optical correction is needed where possible. Glasses or contact lenses can be used depending on the child's preference. Many children with albinism are legally blind (Thomson & Thomson, 2007).

Social information processing and social cognition

Social information processing and social cognition refers to the way children process and interpret cues in a social situation and arrive at a decision that is more or less competent (Crick & Dodge, 1994; Dodge, 1986, cited in Elizabeth A Lemerise and William F. Arsenio). MacCuspie (1996) describes social cognition as the 'understanding of social relationships' (p. 18). She claims that it relates to children's levels of cognitive understanding and intellectual development in terms of social ability and social competence. She agrees with cognitive focused psychologists who

argue that social skills such as 'social perspective taking' (comprehension of the feelings and circumstances of others) are developmental, and 'emerge in conjunction with increased cognitive understanding' (p. 18).

Social cognition is considered an important mediator in the socialisation process (Andrews and Lupart, 1993) and refers to the knowledge and cognitive activities employed in dealing with society (Pearl 1987, cited in Andrews & Lupart, 1993). It is concerned with how children conceptualise other people and how they come to 'understand the thoughts, emotions, intentions, and viewpoints of others in social situations' (Shantz, 1975, p. 258). It underpins how individuals process social cues, operate appropriately in various situations, and show appropriate feelings.

The Problem

Severe loss of vision impacts on the way in which children interact with their peers. In addition, children who look different according to Waugh (2008) frequently feel isolated and experience teasing. Young people with albinism, who have difficulties with visual acuity and processing visual clues especially in bright light, have a significant challenge in developing social understanding and knowing how to operate in a socially appropriate manner in a range of situations (Palmer, 2004).

Aim of the Study

This study aimed at investigation the social cognition of children with albinism and the ways they processed social clues in various situations. The research questions on how teachers and parents described the participants' social cognition, whether they say or do things that fit inappropriately with what others are saying and doing and whether they show inappropriate feelings.

Method

Both qualitative and quantitative approaches were used to gather the data. The use of the Social Emotional Dimensional Scale (SEDS) enabled data on students with albinism, to be quantified and to be compared with data collected on sighted peers. Qualitative methods involving parent and teacher interviews facilitated the establishment of common themes and the collection of rich data that added depth to the findings.

5.1. Participants

The principal participants in this study were ten young people with albinism. They were selected on the basis of type of albinism, age, grade level, school location and vision status. Although ten parents consented to their children participating in the study, only seven agreed to be interviewed. Nine students with no vision problems also participated in the study. They were recruited to help interpret the findings on children with albinism, and to gauge the differences in performance between students with albinism and those with normal vision. The profile of students with albinism in terms of gender, age and visual acuity is presented in Table 1.

Table 1: Profile of students with vision impairment in terms of gender, age and visual acuity (Pseudonym)

Name	Gender	Age	Visual acuity		Name	Gender	Age	Visual acuity
Don	M	10	6/60; 6/60		Jason	M	13	6/60; 6/24
Pam	F	11	6/60; 6/60		Denis	M	11	6/36; 6/36
Toni	F	11	4/60; 4/60		Trevor	M	11	6/24; 6/24
Sam	M	14	6/24; 6/24		Sally	F	8	6/24; 6/24
James	M	9	6/60; 6/60		John	M	16	6/60; 6/60

5.2. Procedure

The researcher interviewed both parents and teachers using a questionnaire that focused on the children's social cognition, social ability, and social behaviour. The same set of questions was used for both. The social ability of the two groups of students (those with albinism and those without) was measured using three aspects of the Social Emotional Development Scale (SEDS) questionnaire which required teachers to comment on behaviour: specifically whether or not the child says things that fit inappropriately with what others are saying; does things that fit inappropriately with what others are doing: shows inappropriate feelings. They were asked to indicate whether the stated behaviour was observed never or rarely, occasionally, or frequently.

6. Findings

The investigation of the social cognition of students with albinism concentrated on two areas, their social understanding and their ability to process social cues appropriately in various situations. The findings from the parent and teacher interviews revealed that some students were described as being be very socially aware, others were perceived to be immature or developing social cognition. The social cognition of both students with albinism and their sighted peers were reported to span a continuum from limited to very good, however, whereas a small majority of students with no vision problems were reported to have very good social cognition, less than half of those with albinism were described in this way, particularly by their teachers.

6.1. Teachers' Views on Social Cognition

The findings from the teachers' interviews indicated that the social understanding of the participants in this study ranged from a lack of social cognition to good social understanding. Teachers made comments such as:

> It's [social cognition] very limited '; 'limited and immature;

> Has good social understanding but doesn't pick up body language very well.

> Does understand but good social skills are not foremost in his mind, and he gets into conflicts occasionally. He tries to maintain eye contact: he obviously has difficulties, but he speaks well.

> He has those basic protocols of pleases and thank yous and using people's names, but the more subtle thing - he often lets his emotions take over, ... there's not a lot of room to reflect on how others are thinking and feeling.

In contrast one young participant with albinism was described as having a fairly mature outlook on her role in a group of people and the roles of others. Her strong sense of how to treat others, and her ability to interact well, were emphasised. The teacher noted that this student was not prepared to be pushed around or walked over. Another teacher believed that a student had good social cognition because other students wanted to meet him before school and at recess and lunch times.

Four of the six members of the sighted group whose teachers agreed to be interviewed were perceived to have excellent social cognition. One of these four students, according to his teacher had 'amazing' social cognition and another was 'very sharp'. On the other hand, two sighted students were described as not skilled in social cognition. One solved problems by running away from them and the other could not understand why boisterous, bullying behaviour was not appropriate.

In summary students with albinism were reported by their teachers to be at various stages of development in social cognition, and so were students with no vision loss. Four members of the sighted group of students were perceived to have excellent social cognition, while no students with albinism were described this way. Unlike some students with albinism who did not always pick up on body language and innuendoes, four of the six students with no vision loss were skilled in picking up hidden meanings and reading body language.

6.2. Parents' Views on Social Cognition

Four of the seven parents of students with albinism who were interviewed believed that their children had good, very good, or intuitive social cognition. One mother described her son as 'a little bit standoffish until he understands what is happening'. She believed that his social interactions and understanding were affected by his low vision commenting that it had caused problems throughout his life. One of the girls whose mother thought her social cognition was poor was 'unable to see other people's points of view, while another with good social cognition was reported to understand what arguments were about.

Young people with albinism were also described by their parents as

> Fairly intuitive, but dislikes being embarrassed or the centre of attention, able to pick up vibes,

> Pretty immature.

> Tends to interrupt, take over, talk over.

> I don't think [the student] picks up what is going on when he walks into a room. I don't think he picks the vibes, 'I've got something on my mind, I want to say something'.

Two students with albinism were considered by their mothers to have very good social cognition. Their comments were in agreement with those of the children's teachers. One was described as particularly good with adults, and the other able to turn on social skills on when needed.

Like the parents of students with albinism, parents of students with no vision loss reported that their children ranged from having good social understanding to 'not being able to read the situation correctly'. Just as four of the seven mothers (57%) of students with albinism thought their children had good social cognition, so did five out of the nine mothers (56%) of children with no vision loss. One mother of a sighted student justified her belief saying: 'He's very quick to understand; he can pick up innuendo and adult humour'. Three parents of students with no vision loss claimed their children could read body language, understand the kinds of moods people were in and interpret what was going on in a situation or whether it was a good time to go into the situation or back off. The parents of sighted children, who considered their children to have low social cognition, also provided reasons. One boy did not read situations correctly or react to them appropriately, according to his mother. She believed this would improve if he could read what people were thinking or interpret what was happening in a situation. Other parents of children with no vision loss were not convinced about their children's social cognition. One boy was able to interpret whether others were friendly or not, but at this stage lacked other areas of social understanding while another did not pick up body language.

Parents and teachers' views on the social cognition of students with albinism were not always in agreement. The parents' views of their children's social cognition varied from not good to very good, whereas the teachers' views ranged from very limited to good. It was clear from the responses of parents and teachers that the major factor that impacted on the social cognition of students with albinism was the difficulty they had in picking up and interpreting subtle visual cues, and body language.

6.3. Social Information Processing

Three aspects were examined in relation to processing social cues and these related to saying and doing inappropriate things and showing inappropriate feelings. The findings indicated that students with albinism at times say and do inappropriate things and show inappropriate feelings. These difficulties can reasonably be blamed on their difficulties in reading body language, interpreting facial expression, and processing social clues, particularly the more subtle innuendos, in various situations.

6.4. Students say inappropriate things

The teacher ratings showed that six (60%) of the group of students with albinism exhibited this inappropriate behaviour either occasionally or frequently. Teachers of students with no vision loss also rated the students. These findings when compared with those of the students with albinism revealed that those with albinism were more likely to say things frequently that fitted inappropriately with what others were saying. Figure 1 shows the percentage of students by category who say inappropriate things.
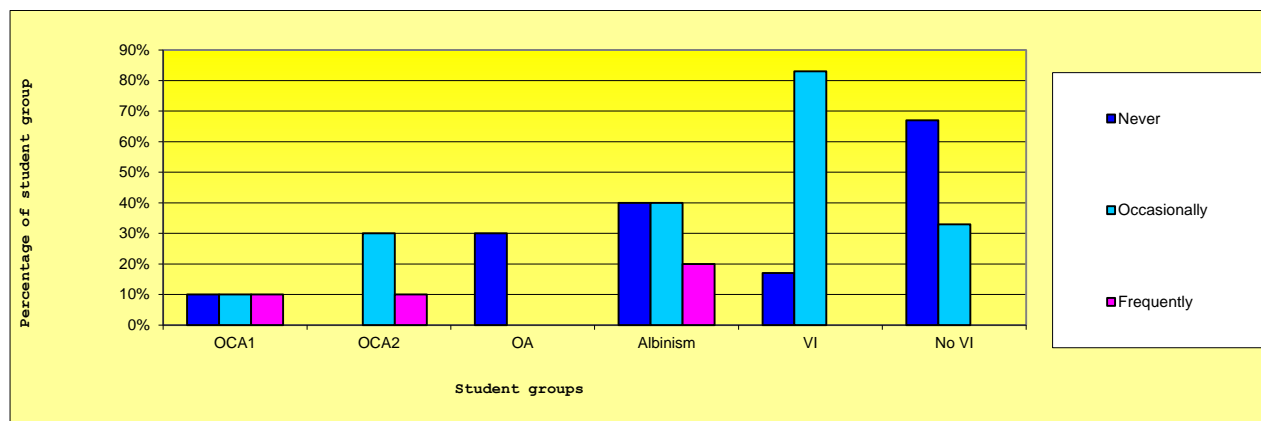
Figure 1 Percentage of students by category OCA I, OCA2, OA, vision impairment but not albinism, no vision

6.5. Students do inappropriate things

Five students with albinism were reported by their teachers to do things that fitted inappropriately with what others were doing either frequently (20%) or occasionally (30%) and five (50%) never. When examined in relation to the behaviour of the sighted students, those with albinism were more likely to behave inappropriately. Figure 2 shows the percentage of students by category who do inappropriate things.
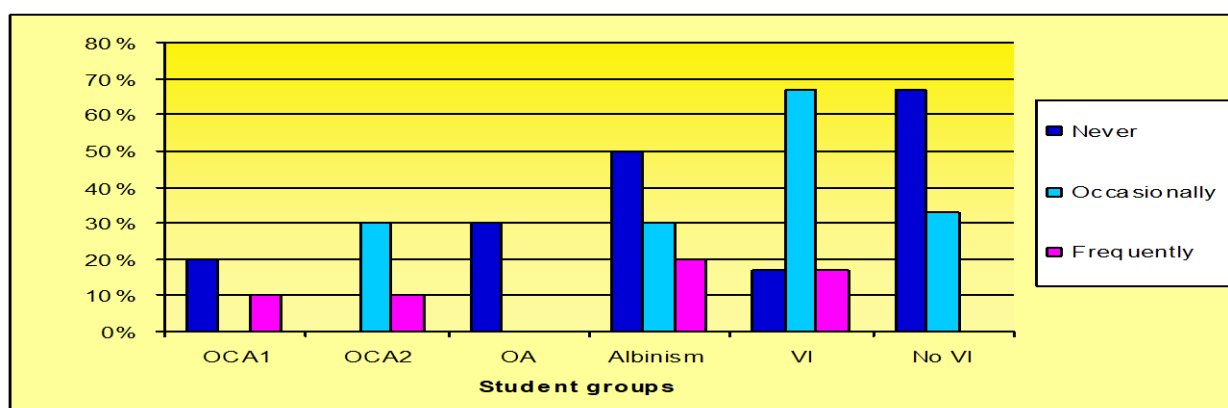
Figure 2 Number of students by category (OCA I, OCA2, OA, vision impairment but not albinism, no vision impairment) and rate of response, who do things that fit inappropriately with what others are doing (N=25)

6.6. Students show inappropriate feelings

Fifty percent of students with albinism were reported to show inappropriate feelings frequently, or occasionally compared with 78% of their peers with no vision loss who never or rarely showed inappropriate feelings. Figure 3 shows the percentage of students by category who show inappropriate feelings.
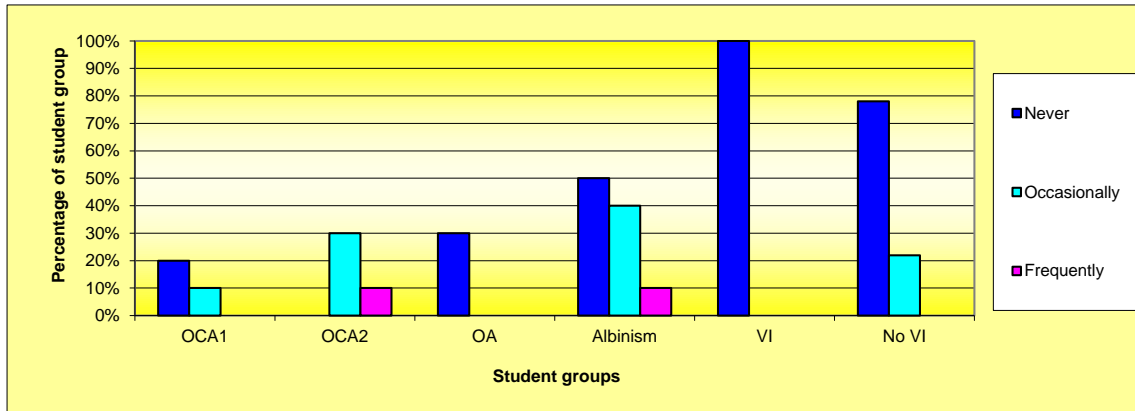
Figure 3 Number of students by category (OCA I, OCA2, OA, vision impairment, but not albinism, no vision impairment) and rate of response, who show inappropriate feelings, e.g. looks or acts happy when should be sad (N=25)

Conclusion

Social cognition and the ability to process social cues appropriately in various situations are critical to social development. This study concluded that the social ability of students with albinism varied from very competent to not very good, in much the same way as the social ability of students with no vision problems. Although there is strong evidence in the literature to support the premise that severe vision impairment has a major impact on the development of social skills (e.g. Eaton & Wall, 1999; Gumpel & Nativ-Ari-Am, 2001; Sacks & Silberman 2000), the findings from this study show that in terms of social ability, students with albinism,   while they have some areas of weakness, are not markedly different from other students. If any aspects of social ability need to be highlighted as areas of concern, the most obvious ones are social cognition and the likelihood that children with albinism will show inappropriate feelings and say and do inappropriate things. These behaviours, along with delayed social cognition have the potential to make this group of children more vulnerable, and more at risk of social isolation.

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Developing an evaluation model for the Continuing Professional Education Program at RIDBC Renwick Centre - Trudy Smith

RIDBC Renwick Centre is a centre for research and professional studies in the field of education for children with sensory disabilities. The centre is operated by the Royal Institute for Deaf and Blind Children in partnership with the University of Newcastle and provides a wide range of teaching and learning opportunities for professionals working in the education of students with hearing or vision impairment and related fields, research in these same areas, and related community service.

An important component of the Renwick Centre's services is the Continuing Professional Education (CPE) Program. Each year this Program offers a variety of professional development opportunities in the areas of Hearing Impairment, Vision Impairment, Braille, Orientation and Mobility, and Multiple Disability through both face- to-face activities (seminars, workshops, conferences) and e-learning experiences. The CPE program is operated by the Centre as a service to the professional community in these small but highly specialised fields.

The RIDBC Renwick Centre aims at providing a high-quality service that meets the professional education needs of educators, school support staff, allied health professionals (e.g., audiologists, speech pathologists, occupational therapists, orthoptists, psychologists), paraprofessionals, and academics working within the field of sensory impairment. Feedback about service provision provides an opportunity to refine and improve the service.

A strategy developed by Donald Kirkpatrick in 1959 has been adapted to create an evaluation framework for the CPE program. Kirkpatrick's theory is still one of the most popular and widely used models for evaluation of training and learning and is an industry standard across the HR and training communities (Mahapatra & Lai, 2005).

According to Kirkpatrick, there are four levels of effective evaluation: reactions, learning, performance, and results (Kirkpatrick, 1959). These are enacted in the CPE evaluation framework at RIDBC Renwick Centre through the use of three tools:

1. Initial evaluation – reactions - a one page questionnaire presented at the conclusion of a professional development event to gather data on immediate responses to the event.
2. Follow up evaluation - learning-an online survey provided four weeks after the event to determine what principles, knowledge, techniques, and strategies continue to resonate with participants.
3. Final review - performance and results - a telephone interview with 5% of participants eight weeks after the event to measure change to pedagogy and curriculum development. Clients are invited to participate in this interview during the online survey.

The evaluation framework was implemented in January this year.

Initial evaluations on the day of the event record the immediate impacts of a presentation and measure participant satisfaction with the presenter/s, course content, and the learning environment (Mahapatra & Lai, 2005). Feedback specifically related to the content is often enthusiastic but remains untested in regard to the impact of the learning in the participants' personal professional setting.

The second stage of evaluation, the online survey, provides participants with the opportunity to reflect on the skills and knowledge gained at a CPE event and to consider if and how that is being put into practice in their professional settings; put simply, it measures what they learnt (Smidt, Balandin, Sigafoos, & Reed, 2009).

The final stage of evaluation, the telephone interview, provides participants with the opportunity to report on the impacts of the CPE event on their own professional practice and, more importantly, any effects on student outcomes that could be attributed to this change in practice. This phase of the evaluation framework will commence in July.

Early data gathered in the online surveys suggests that CPE events are having a positive impact on professional practice. The take up rate of this voluntary stage of evaluation currently sits at 50% of attendees. As a result, this data can not be used to make any definitive statements about the overall effectiveness of the program. However, the data collected to this point are encouraging.

Some sample responses are provided below.

How are you using the skills and knowledge that you learnt from this event?

> I teach a pupil with vision impairment and am learning how to assist him more successfully in the classroom. I now have a greater understanding of his needs and methods/techniques/technology to aid his development.

> The skills and knowledge learnt from this course have helped me implement how we teach a practical lesson within science to be interesting, tactile and safe for the student to participate in with guided support.

> I learnt so much and took away lots of strategies which I have since put in place.

> ...I gave a staff meeting talk and spoke to my class about what I learnt from the day so others would be aware ...

Do you believe that the skills and knowledge that you learnt from this event will improve the educational outcomes for the students and clients you support?

> Yes, it's a learning curve for all involved and we have to become creative in our experimental design while also trying out new technology to assist with

the learning of the student. We have been making quite a lot of modifications to experiments so the student can be involved.

I can see that our student is learning with the support that is in place so outcomes should improve.

Yes, as I am reworking my Individual Programs and procedures to incorporate what I have learnt.

As already discussed, this is the first iteration of the evaluation framework and early implementation indicates that there is some work to be done to refine the process. Strategies are being developed to promote engagement with the online survey and to encourage ongoing discussion between participants and the presenters.

The long-term goal for this evaluation framework is the collection of data which will directly contribute to the planning for specific events and future presentations in the 2012 CPE calendar and beyond. The development of this framework is a positive step towards achieving that goal.

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Multisensory Environments in Finland: Experiences of 12 interdisciplinary staff members working as service providers for adults with vision impairment and additional disabilities - Marja Sirkkola & Paul Pagliano

Marja Sirkkola - Senior Lecturer, HAMK University of Applied Sciences, Finland

Paul Pagliano - Associate Professor, Education James Cook University, Australia

Abstract

This research used focus group interviews to investigate the ways 12 experienced Finnish practitioners working in three Multisensory Environments with adults with vision impairment and additional disabilities apply sociocultural animation, a form of Finnish social pedagogy that emphasises human dignity. A second research focus, therefore, was to examine the ways staff practices might be influenced by the specifically Finnish sociocultural con- text. A synthesis of the interviews underlines the essential roles of clients' free choices in sensory activities and the need for high-level communication between interdisciplinary MSE team members. Results indicate that although much of what the practitioners do is consistent with non-Finnish ideas, much is also distinctly Finnish.

Introduction

Morris (1997, p.54) believes it is not possible to have 'care and empowerment' because it is 'the practice of caring which has led to the perception of ... people [with a disability] as powerless'. She explains:

> Empowerment means choice and control; it means that someone has the power to exert choice and therefore maximise control in their lives .... Care ... has come to mean not caring about someone but caring for in the sense of taking responsibility for. People who are said to need caring for are assumed to be unable to exert choice and control. (p.54)

Morris, therefore, rejects the idea of care as a practice where responsibility is taken for an individual. The provision of 'adequate support' (Morris, 1997, p. 55) to enable the individual to exercise choice and control, she argues, is a human rights issue to be promoted whenever and wherever possible. When the person has vision impairment and additional disabilities the provision of adequate support is especially challenging. This is because many practitioners predominately rely on vision and verbal communication to provide choice options.

A deep concern for the incompatibility between caring and empowerment is what led Hulsegge and Verheul (1987) to develop Snoezelen in the Netherlands in the 1970s.

Snoezelen

The original Snoezelen consisted of a series of sensory rooms for relaxation and leisure. When Hulsegge and Verheul (1986) first developed Snoezelen their emphasis was on the client having free choice and control. Even when the person had severe difficulties in communication, facilitators were encouraged to carefully observe the individual so adequate support could be provided to enable that person to exercise genuine free choice and control. Snoezelen has been specifically developed for individuals with vision impairment where non-visual options to express free choice are provided (Keck, 2009).

The appropriation of the term Snoezelen® by the commercial company ROMPA as a trademark for their products prompted the emergence of a new term Multisensory Environment (MSE).

Multisensory Environment (MSE)

The purpose behind both Snoezelen and MSEs is to improve the quality of life of people with disabling conditions, particularly those who have experienced some form of sensory deprivation. Snoezelen and MSEs have been constructed in many countries throughout the world and they are becoming increasingly popular. This is despite the scant scientific evidence regarding their efficacy (Vlaskamp, deGeeter, Huijsmans & Smit, 2003; Kaplan, Clopton, Kaplan, Messbauer & McPherson, 2006; Singh, Lancioni, Winton, Molina, Sage, Brown & Groeneweg, 2004).

One reason for their popularity is the idea that the MSE is a form of media through which a person can communicate choice and control rather than a particular type of therapy (Sirkkola & Pagliano, 2009). According to Pagliano (1998) a MSE is a space:

> ...where stimulation can be controlled, manipulated, intensified, reduced, presented in isolation or combination, packaged for active or passive interaction, and temporarily matched to fit the perceived motivation, interests, leisure, relaxation, therapeutic and/ or educational needs of the user. (p.107)

Pagliano (2008) went on to describe the MSE as a form of media for communication at a concrete or pre-cognitive level. Controlled multisensory stimulation becomes 'an individualised behaviour scaffold' where successful use is dependent upon staff being sensitive to 'ongoing internal changes in the individual' (Pagliano, 2007, pp. 4-5). This, therefore, requires 'frequent monitoring, systematic evaluation and both short- and long-term adjustments of the external environment coupled with the use of highly specialized pedagogy' (Pagliano 2007, pp. 4-5).

The Finnish experience

Sirkkola (2005) has estimated there to be at least 200 MSEs in Finland across the domains of special education, health and social care. In Finland many MSE practitioners have had professional MSE education offered as part of the Social

Services Degree Programme at HAMK, University of Applied Sciences (HAMK, 2008).

Pagliano's ideas on the MSE have been largely adopted, although local adaptations have also been introduced. This is because his ideas are considered to be congruent with the Finnish cultural aspirations of egalitarianism, participation, and empowerment together with an affinity for the natural environment: forests, lakes, summer cottages and saunas and its sentiment of melancholy (Lewis, 2005). One popular Finnish adaptation to the MSE is the social pedagogical approach called 'sociocultural animation'.

Sociocultural Animation

Sociocultural animation is used in special schools and social care units that have chosen social pedagogy as their main framework for action. Social pedagogy first emerged in Brazil (Freire, 1973; 2001), but was later adopted in other countries, often in modified ways to suit local conditions. In Finland, Hamalainen and Kurki (1997) combined Freire's ideology with ideas taken from German and Spanish social pedagogy and reinterpreted them to fit important Finnish social values like egalitarianism and cultural democracy (Koivunen & Marsio, 2008). The result is Finnish sociocultural animation, an approach to working with people who are vulnerable, that focuses on preventing marginalization through participation and empowerment. This approach therefore fits neatly with the idea of the MSE as a form of sensory media for communication of choice and control.

The aim of empowerment is to increase the social strength of individuals and their communities. Siitonen (1999) describes empowerment as an internal feeling of power, which enables the empowered person to develop confidence in his or her own capacities and thereby find joy and pleasure in day to day activities. Ryan and Deci (2001) argue that empowerment links to self-determination and emerges through essential elements, such as autonomy, self-regulation, initiation, self-realisation and responding to events (Wehmeyer & Schalock, 2001). According to Ryan and Deci (2001), if people have a good feeling about their own self-determination, they are curious, vital, and self-motivated.

Empowerment gained through participation in community activities is such a highly regarded value in Finnish society (Siitonen, 1999) that any focus on promoting client empowerment will also be extended to strengthen staff empowerment. Empowerment therefore is not viewed in isolation. It is thought to apply simultaneously to both client and practitioner.

Sociocultural animation involves staff working to better understand each client, by being more aware of their particular chronological and sociocultural context (Vygotsky, 1978; Bronfenbrenner, 1979; Bronfenbrenner, McCelland, Wethington, Moen & Ceci, 1996). It further involves staff dealing forthrightly with any human dignity difficulties by involving both clients and staff in activities that promote mutual

feelings of togetherness and belongingness (Hamalainen, 1999; 2003). This is particularly important when the person has vision impairment and additional disabilities because non-visual means of togetherness and belongingness must be included.

The concepts behind sociocultural animation resonate with the principles of normalisation (Nirje, 1985) and social role valorisation (Wolfensberger, 1985) in that they each emphasise the importance of ensuring that people not only live in, but also become active members of their respective communities. The adaptation of sociocultural animation has therefore necessitated an expansion of Pagliano's idea of the MSE to take it out of the confines of a particular room and move it into the individual's everyday life space. Sirkkola (2008) calls this adaptation 'sociocultural multisensory work'.

Sociocultural Multisensory Work

Sociocultural multisensory work goes beyond the unfettered offer of multisensory activities within MSE prototypes (Pagliano, 1999), to promote meaningful everyday life events. The Finnish MSE experience therefore incorporates elements such as sauna and bathing facilities, kitchens, and ordinary everyday living areas with open fireplaces. Everyday activities like baking, gardening, and the pursuit of creative endeavours   such as music, visual art and handicrafts are all linked to the sociocultural animation process. These activities tend to be more multisensory than visual.

Combining the theoretical and practical elements of sociocultural animation, with MSE theory and practice is both novel and challenging. This is because individuals with vision and additional disabilities have exigent disorders of communication that make conventional participation and empowerment especially problematic. Since MSE practitioners come from a diverse range of different disciplines, communication between staff needs to be interdisciplinary, where members use a shared conceptual framework and draw together disciplinary-specific theories, concepts, and approaches to address a common problem (Rosenfield, 1992; Frattali, 1993).

Research aim

The aim of this research was to use focus group interviews with 12 experienced Finnish practitioners (social workers, nurses or therapists) working in three communal day centres with adults with vision impairment and additional disabilities to investigate how they collectively apply sociocultural animation in the MSE. A second research focus is to examine how their practices are specifically influenced by the Finnish sociocultural context.

Focus group interviews

According to Eskola and Suoranta (1998), the interview is one of the most common research methods for gathering qualitative information in education and sociology in

Finland. A group interview is essentially a qualitative data gathering technique that finds the interviewer directing the interaction and inquiry. Depending on the purpose of the interview this process can be either structured or unstructured (Denzin & Lincoln, 2000). Some authors make a distinction between group interview and focus group interview: group interview can be applied to collect and create information of specialized professional areas broadly, whereas focus groups typically emphasize a specific theme or topic in depth (Bryman, 2001).

The focus group data collecting method is relatively time consuming, but easy to modify to match the researcher's purposes. In Finland, the focus group interview is often used for gathering evidence-based knowledge of evolving practices. In this research, the focus group interviews are used for four important reasons:

> 1) social interaction in the group produces freer and more complex responses than in other types of interviews, 2) the researcher can probe for clarification and solicit greater detail during the interview, and 3) responses have high face validity due to the clarity of the context and detail of the discussion (Cohen, Manion & Morrison, 2000; Bryman, 2001; ISUE-Focus Group, 2007). A fourth local reason relates to diversity of language and culture and the need to translate ideas from Finnish and/ or Swedish to English and back. This is because even if the focus group was held in Finnish and/or Swedish (the languages used in the MSEs under investigation) the research report is being prepared in English.

Due to the complexities of language and culture it was felt that the best research method would be to use the one with which participants would be the most familiar and which was relatively easy to conduct across the three languages and cultures. It was more important to collect data about how members of the multisensory team discussed the focus areas (participation and empowerment) than what their opinions as individuals were (Bryman, 2001, p. 336). Furthermore, the opportunity to form collective meanings was considered to be particularly important and relevant for interdisciplinary team members.

The three worksites

All three worksites have both indoor and outdoor MSEs and use ordinary living areas for everyday multisensory activities. The largest work site is located in the middle of a small forest and has a new sensory garden with outdoor equipment, such as a wheelchair swing and a carousel. The other two sites have access to gardens and arrange various outdoor activities, including sensory walks, celebrations and picnics for multisensory purposes. All sites have specific plans to develop their outdoor MSEs in the future.

Indoor areas include multisensory rooms, sensory walls and corners or small tents with multisensory mobiles and related equipment. The main room for all settings is the *'White Room'* (Pagliano, 1999, pp. 43-44), which is used at least weekly. Considerable emphasis is placed on ensuring that the MSEs and their equipment are

as natural as possible; this means, for example, that no plastic trees or flowers or kitsch-style decorations are used. Instead, recently developed Finnish high-tech equivalent is included, such as the physioacoustic chair (Karkkainen & Mitsui, 2006; Lehikoinen, 1994). A computer attached to a physioacoustic chair creates low frequency sounds (below 60 Hz) through six amplifiers. These sound vibrations resonate to relax muscles and other body tissue. In other words, the body starts to vibrate with the low frequency sound. At all three work sites physio-acoustic chairs are used for clients' multisensory relaxation and wellness, but at one of the sites they are offered also for the staff members' wellbeing aiming to prevent stress and treat high blood pressure (Sirkkola & Nieminen, 2007).

The focus group interviewees

During the year 2006, 12 experienced MSE practitioners were interviewed in three groups comprising (three, four and five members respectively). They had various professional backgrounds: five social instructors (Bachelor's degree from a university of applied sciences), six practical nurses (Occupational degree from a vocational institute) and one music therapist. The interviewees had an average of six years experience working with individuals with vision impairment and additional disabilities. Finally, 11/12 of the participants had undertaken staff education courses at HAMK.

The research process

The three focus group interviews were held at the staff members' work settings. They were conducted in Finnish and Swedish as required and held during working hours. Throughout the study a high ethical standard was maintained: permission forms were signed by all interviewees and their administrative heads and approval obtained from the ethics committee at each work site.

The focus group topics were sent via e-mail to the three work sites a week before the interview took place. All three interviews lasted from 80 to 95 minutes and were video recorded. Each interview began with a 'warm up' consisting of discussions about each team member's job description, prior professional studies or special interests relating to MSE use.

The Finnish author conducted the interviews and facilitated the group interaction. She kept the discussion on track by asking two open-ended questions formulated to stimulate discussion and to motivate the group into providing innovative and practice-based answers.

The two open-ended questions were:

1. In what way is sociocultural animation used to strengthen client and staff empowerment at Finnish MSEs?
2. In what ways are creative activities and everyday experiences used in Finnish MSEs?

The interviewer assisted the group discussions by inviting interviewees to precisely define all relevant terms and themes and to share stories from their daily work in the MSEs to illustrate practices. If the explanations were not sufficiently clear, additional examples were requested.

The process of data collection and analysis

The process of data collection and analysis followed eight distinct steps applied from Cohen, Manion and Morrison's (2000) advice in the following way:

1. At the completion of each interview, the researcher took time to prepare her own personal field notes in which she identified the main ideas raised during the interview and recorded her own thoughts.
2. The researcher then viewed the video and reflected on its contents adding further comments and observations to her field notes. This review and reflection process occurred on the same day as the original focus group interview.
3. On the day after the interview the researcher reviewed the video again and added further commentary to her field notes and started to prepare a transcript of the most relevant parts of the discussions.
4. Once steps one to three had been completed for all three focus group interviews the researcher collated her notes from the interview transcripts and organised them by main ideas. The most informative ideas were then translated from Finnish / Swedish into an English script.
5. Next the English script was forwarded to interviewees by email with an invitation for them to comment on its accuracy, to provide clarification if necessary, to rewrite parts or even to add new ideas. Even though all interviewees were proficient in English, they were given the option to reply in Finnish, Swedish or English.
6. Although feedback provided by the interviewees confirmed the accuracy of the researcher's interpretations, a number of respondents did provide additional information and examples.
7. Revised transcripts were then analysed and further characterization applied to form six categories of the main ideas, collective meanings and key issues of the focus group topics.

Results

Results are organised under six categories. Direct translations of interviewees' narratives are stated in italics. Points not in italics were synthesised from multiple statements made during the focus group interviews.

1) Enabling free choices of activities

An ideal MSE for adults with vision and additional disabilities is easy to change to suit particular purposes, the most important of these being relaxation and choice;

something that begins with the client deciding whether he or she wishes to enter the room or start an activity. This continues by providing opportunities for individual clients to practice free choice by either selecting a particular activity or choosing to do 'nothing but be together' in the room. Time is available 'to do nothing' if that is the client's preference.

The opportunity for relaxation was thought to be important for both clients and staff. Both require demand free moments, especially in work environments where the strident vocalisations of restless individuals and the pressure of daily routines can cause serious sensory stress to both clients and staff. In line with the need for a calming and relaxing ambience, staff cautioned against offering too many boisterous activities or exaggerated forms of stimulation: 'Sometimes just closing sliding doors and working in smaller groups can help to reduce unwanted and stressful noise sensations.'

Empowering participation in creative activities means, that it is not the adviser who tells the client what to do, instead the adviser offers options. Listening sensitively is crucial.

> Many clients are able to express that they don't like something. They turn away or vocalize something or, for example, simply spit the food away if they dislike it. If someone is afraid of a new experience, they can try it or leave it or do something else.

Mime and gesture, but also breathing, pulse, sweat, stiffness, or anxiety, help staff understand what is occurring without verbal indications.

> You can also tell the difference if someone does not like, for example, the music or massage; client cannot verbalize a dislike, and may also show no signs, but may be very relieved, when taken away from the situation. Sometimes clients can be too dependent on acceptance and just be polite; or they may simply be unable to show their hesitation. They do not show their dislikes immediately, but show their happiness afterwards, when the unwanted situation is over.

Sometimes the ability to listen sensitively and accurately may be reached only after several years of work with the client.

2) Connections to learning and pleasure

Learning and getting used to new environments may take time:

> ...eventually you get empowered. If a client does not take part at the beginning of activities in a MSE it may take even half a year or more until that person wants to come in or try something. However, finally it may even turn out to be his most favourite activity like hand massage, relaxation on a physio-acoustic chair or sleeping under a ball blanket

(weighted blanket with plastic balls inside, used for deep touch pressure and relaxation).

Empowerment means learning new social competencies, for example, being in a group:

> ...one young man has improved his social abilities in our MSE. Two years ago he could not stand classical music and only wanted to listen to rock. Today he has learned to accept other kinds of music and he knows that if he waits long enough, his turn will come and he then has a possibility to choose his favourite music.

Altering the MSE by moving some pieces of furniture or equipment may lead to positive surprises, but they are also essential for the clients to experience novelty. However, changes of environment engender extreme anxiety causing the client to leave the room or refuse to participate. Therefore, staff members must know their clients' habits and personalities well. On the other hand clients need to trust their caregivers, since mutual reliance is a prerequisite for enjoyment. Promises like 'nothing dangerous will happen' or 'if you dislike something you can stop the activity' may be sufficient.

> Maybe some kind of a trade, an extra cup of coffee or some similar offers, have to be done when negotiating about trying new things. Also, the promise to stop, for example, the massage or music, if the activity is not liked, may help.

Even though minor surprises and changes in MSEs are beneficial for learning, it is essential to have a steady plan. Repetition of routines helps the clients to understand and remember what is going on. Enough time to react to the offers and for choosing one's favourite activity animates learning.

> The morning sessions, where everyone has their own role to do something special, are created to animate the clients towards active participation. There are routines like singing songs, asking and answering, 'who is here?' and roles of telling about the weather or today's activities.

Pleasure and reward were felt when 'something goes smoothly with the clients' or when the clients were happy and pleased. 'Empowerment is a feeling, when you have had success with some new thing in a MSE, and you get excited about that. It is joy of success when you have offered a moment of good feeling to another person.'

3) Ergonomics, practical ideas and backup from administrators

When hoists and furniture in a MSE are functioning well and are ergonomic, then both the clients and staff members are able to enjoy 'physical empowerment'. This enables them to concentrate on the other positive aspects of being in the MSE.

Empowerment also translates into increased opportunities for members to build and develop MSE's equipment and physical surroundings according to the team's ideas. If someone gets an idea for improvement, most often there is a desire to try the idea immediately. Administrators should back up the MSE team appropriately, because it can be very disempowering to wait for months for financial support or for technical assistance. Some innovations may even be economical: A narrative concerning staff's creative interventions focused on a visit to an ice-skating hall. One person's wheelchair was impossible to lift into the ice ring and therefore the staff used an old orange, plastic chair with twisted legs instead. This client, who was very restless and repeatedly swinging her upper body, now sat still and enjoyed the fast ride on the plastic chair smiling and concentrating on this novel experience. It is of note though that the same chair, when used as an ice-sledge, did not appeal to the other clients at all. Many empowering multisensory experiences are client centred and, therefore, provide unique sensations that somehow tap into individual needs.

Every individual has their own pace and own variations for how, when and for how long a period of time to use multisensory equipment and arrangements, as illustrated in following example:

> One person, normally sitting in a wheelchair, can also roll and crawl on the floor. It took her almost two years to figure out and communicate that she enjoys rolling into a multisensory tent. She makes noises with the mobiles and scratches the walls. One of the advisers then scratches the tent's walls from outside and this make the person giggle.

4) Success in creative and sensory activities

Wheelchair dancing and sensory theatre were mentioned as examples of activities performed by advisers together with their clients. Examples of activities where clients could more fully participate, were other creative art and music events using technical aids like Sound Beam (device which uses sensor technology to translate body movement into digitally generated sound or image), microphones and special music instruments specifically designed to promote client participation.

> During a sensory theatre performance and during its practice period a woman resident experienced moment of empowerment, when she was performing a poem and used a microphone. Her voice was originally quiet and shy but was then transformed by the microphone. She gained great enjoyment from experiencing her loud and clear voice through the microphone.

Everyday activities like baking and cooking inspire a person's sensory attention. Empowerment can be seen as gaining satisfaction from success in these daily activities. Also, handicraft activities such as ceramics, making candles, finger painting during art sessions, kneading dough, and beauty treatments like sugar massage or a cucumber mask were named as examples of empowering sensory activities for clients. Similarly, common early childhood games based on rhythm,

surprise, 'hide and seek' and repetition of gestures and voices were used to enhance creativity and communication with clients. Sometimes the lack of lifts or other technical aids made it difficult to arrange activities involving physical movement. Simple activities involving movement were jumping and bouncing on a trampoline together with a helper. Singing and rhythmical clapping were easy to carry out with adults with severe physical disabilities. Activities such as playing in the ball pool, lying in a waterbed or hammock were also used.

Even though horseback riding and swimming often demand extra personnel and special environments, these activities were used as part of personal multisensory programs. Clients may benefit from these demanding special sport activities in several ways, as their sensory and movement systems are activated. Additionally, the rare feelings of independence and excitement may animate empowerment. This happens, for example, when a person is safely floating in a warm pool or riding on a horse experiencing the rhythmical movements, sounds, smells and warmth of the horse. 'Clients feel happier and appreciate themselves more; they have a chance to improve their self-esteem'.

5) Multisensory signs, reminiscence and multimedia

Multisensory signs are nonverbal or verbal signals that inform the individual about the next activity. They facilitate understanding in the individual with sensory problems regarding what is going to happen. Multisensory signs may have same sensory elements as the new activity, for example, a sniff of a particular spice introduces a baking session.

Another tool to increase sensory awareness is digital media, which was suitable for those clients with low vision. Large colourful digital pictures projected to the wall or ceiling provide an inspiring tool that can capture special personal multisensory moments. It is particularly valuable for clients with low vision to revisit an enjoyable activity afterwards through an enhanced visual reminiscence moment. Voices, sounds and movement, like walking and swinging, are easier to capture on video than in still pictures. Staff started to think, how videos could be used with a client who was blind:

> A blind person was horseback riding for the first time and was advised to pay attention as to how the horse turns to that side where she balances and looks, and how the horse then starts walking into that direction. It was very empowering for her to notice that she herself was the leader of that big animal.

On many occasions staff put in a tremendous amount of preparation in order to be able to offer a special sensory activity, for example, a sensory walk in a forest. 'Then the activity is over in a few minutes!' To prevent frustration of this type revisiting the activity on video or looking through still pictures of the activities might be

experienced as pleasurable and empowering. Both clients and staff could benefit from these virtual experiences and could enjoy the success of previous happenings.

All three places used everyday massage and music selected by the clients themselves. Staff members offered several options and waited for a sign as to which CD or aromatic oil for massage was preferred, as indicated by a smile, gesture, or any verbal signs of acceptance. Sometimes these responses appear very slowly, and the staff member waits patiently, not hurrying or even deciding on behalf of the client. In music groups each song has a simple picture as a symbol so that sighted participants can choose their favourite songs by looking.

A music therapist told a story about one tiny person and her personal signs; He was able to hold her in his arms and swing, or dance with her according to the music. When he stopped moving, the person had to give a sign; for example, some verbal sound or movement, if she wanted this interaction to continue. Some days she wanted this 'dancing' to continue for a longer time and some days she could stand it just for a couple of minutes. This narrative raised questions concerning the first time, when some kind of a sign is invented or noticed. 'When and how did this sign start? How are these sensitive nonverbal signs noticed and memorized?'

6) Empowerment through communication

'It is important, that staff members know each other well and have a good relationship with each other.' Even if people use different work methods and theoretical frameworks, they feel free to ask another team member about their opinions and even criticize each other without hesitation or umbrage.

Since most people with vision impairment and additional disabilities are not able to talk, it is very important that the staff members communicate a lot with each other and with their clients. They want to find out what their clients' intentions and meanings are, what their likes and dislikes are, and how the other staff members interpret the clients' personal signs. Finding solutions to these problems as a team, empowers the staff members but is simultaneously also a part of the client empowerment. 'It is essential to find out what the clients' free choices for multisensory activities are.'

In difficult situations the morals and ethics of what to do next are to be discussed with all staff members and a suitable action plan needs to be developed. For example, if a person starts to engage in self-injurious behaviour when in the MSE, the activity should be stopped, and the client gently removed from the space. Sometimes advisers need to be strict without any further conversations. This may happen, for example, if the clients get too confused, irritated or loud. Clear instructions what to do and for how long may be needed. This is interpreted as understanding of the needs of the client, not as neglecting their wishes and choices.

Discussion

The discussion is divided into three parts: 1) Use of sociocultural animation in Finnish MSEs, 2) Congruence of staff comments with Pagliano's MSE description, and 3) The pertinence and value of the focus group interview as a research method into client and staff empowerment in MSEs.

Use of sociocultural animation in Finnish MSEs

According to the focus group interviews, clients were 'dealt with human dignity' (Hamalainen, 1999) while they visited MSEs or during the everyday multisensory situations. The sociocultural animation helped to create reciprocity of empowerment, which is the basis for 'experiences of togetherness'. Other forms of sociocultural animation were identified in the attitudes towards the clients, for example, not just motivating the client, but sensitively listening to what the client's own choices were and in the appreciating attitude towards colleagues' knowledge of the clients. Therefore, also continuous dialogues among staff members were highly valued and critical comments appreciated in order to develop multisensory practices. During the focus group discussions many questions were raised, and collective answers were negotiated. Knowledge about each client was more precise if team-members shared their experiences and understandings, but emerging questions showed that there are still many unanswered practical questions.

The assumption that sociocultural animation's important element, client empowerment, links to self-determination (Wehmeyer & Schalock, 2001), gained some credence in the practitioners' examples on how they work and how their clients respond in various situations of everyday life. According to their experiences: sociocultural animation 1) increases client's autonomy, whether it be active or passive, 2) allows clients to self-regulate by choosing for how long activities last, how many sensory inputs are taken at one time and with what kind of volume or speed these inputs are arranged, 3) facilitates client initiation and response to events, and 4) facilitates self-realisation.

Besides activities in MSEs, everyday situations and creative activities were used at all three work sites to increase the amount of multisensory experiences. Creative multisensory activities were most often practiced in ordinary living environments. This may sometimes not be the optimal solution, for example, for adults with visual impairments, who might benefit more from activities under black light with fluorescent materials. An everyday living environment and being together in a group seemed to be more common than individualized therapy sessions in Finnish MSEs. Besides sociocultural aims, there might be economical and practical reasons for this, since most of the day activities in Finland are arranged as group initiatives and only some forms of music, speech or physiotherapy are provided for one client at a time. It is obvious that more focus group discussions and specific research about this matter are needed.

Perceived congruence of staff comments with Pagliano's MSE description

The 12 interviewed staff members underlined that empowering work in the MSE is a demanding 'process which needs highly specialized pedagogy' (Pagliano 2007, p. 5). In this case social pedagogy is used and as Pagliano explains, 'it can take a variety of physical, psychological, and sociological forms (Pagliano 1998, p. 107).

No single person alone can work with this challenging task with each client being so different. Therefore, the value of interdisciplinary teamwork, where staff members develop a shared local conceptual framework, cannot be overestimated.

The observation that 'Successful use of the Multisensory Environment must be sensitive to ongoing internal changes in the individual' (Pagliano, 2007, p. 5) was discussed during the focus groups. Staff members underlined the importance of recognizing unique learning processes demanding individual scaffolds and freedom of choice. It was particularly interesting to note how Pagliano's (2007, p. 5) description of the 'Multisensory Environment as a process ... [becoming] an individualized behaviour scaffold' was repeated in interviewees' own words: gaining more self-confidence, looking happier, giggling and as clients' successful participation in activities leading to feelings of empowerment.

It was felt that when working together as a team, staff members of the three Finnish MSEs were competent to arrange activities to 'fit the unstable sense abilities' (Pagliano, 2007, p. 5) due to their previous staff education in MSEs and due to their long experience of using this medium creatively. These MSEs are well equipped with spaces and utensils, allowing the presentation of 'simulation in isolation or in combination, intensified or reduced and shaped for passive or active interaction' (Pagliano, 2007, p. 4).

Additionally, these MSEs offer opportunities for natural out-door experiences and group activities and expand on the idea of the MSE being a 'dedicated space' (Pagliano, 2001, p. 8). This dedication allows also national and sociocultural differences accepting, for example, the idea of a Finnish sauna being a MSE.

Staff members believe that Pagliano's descriptions of MSEs were useful when they were combined with Finnish social pedagogy. However, one important difference was observed; Finnish social pedagogy and its tool sociocultural animation underlines the meaning of communities (people living or working together), and values empowering togetherness in addition to individual's learning, therapy, and leisure processes.

The pertinence and value of the focus group interview as a research method into client and staff empowerment in MSEs

Focus group interview was chosen, because it was thought to be a suitable way to gather authentic, detailed information about a particular topic. It was particularly valuable for the reason that the 12 staff members were familiar with this interview technique and it enabled them to comfortably and confidently share their

understanding of how Finnish social pedagogy theory and praxis could come together for clients with vision impairment and additional disabilities in the MSE. Familiarity was necessary because this report required communication across three different languages and cultural contexts.

Collecting data by videoed focus group interviews and using them to identify practical knowledge was an interesting, but a slow process. Videos enabled appreciation of nonverbal responses, for example, where participants nodded, smiled, or made some other gestures for approval or denial to someone else's suggestion. Analysing data involved a careful advancing of translations from Finnish and Swedish to English using ongoing iterations. This occurred because the interviewees could read and then comment on the English text before the final version became ready for publishing. The process enabled us to uncover important cultural assumptions previously taken for granted, the most significant of these being the idea that sociocultural animation is indeed possible with adults with vision impairment and additional disabilities even those with the type of exigent disorders of communication that make empowerment especially problematic.

A third positive feature of the focus group interview was that it gave the Finnish researcher a chance to join the three discussions in real time and elicit explicit examples from everyday practice that would clearly demonstrate how theory could be put into practice. This required the interviewer to be ever vigilant not to personally overestimate the possibilities of sociocultural animation while subtly keeping the dialogue squarely focused on everyday practice.

Finally, there were two aspects concerning the quality of the method that need to be considered, namely data collection and analysis. There is the danger that the 12 staff members possibly wanted to please the interviewer during the focus group dialogues because she was personally familiar to them. This phenomenon is always a challenge in interviews particularly when interviewees are trying to be polite. In order to minimise this problem, the interviewer tried to focus the dialogue onto how to overcome difficulties staff might experience when working with their clients in the MSE. The second aspect concerning the quality of the research is the authenticity of the translated results. This was an enormous challenge, but it was greatly helped by the Finnish researcher who is personally fluent in all three languages describing the interview process in considerable detail, iterating the translated texts among participants, and retranslating ongoing discussions.

The concept of rigor in qualitative research is construed as confidence in the findings representing the meanings presented by the participants (Creswell, 1998). Since the participants of the focus group interviews all were content with the description of the results, it is believed this method served the research aims.

Conclusions

The goal of this research was to describe the ways that the Finnish social pedagogical approach 'sociocultural animation' is used within a practical context in the MSE. Special focus was on client and staff empowerment, creative activities and everyday multisensory experiences. Four interlinking conclusions can be drawn:

1. Finnish social pedagogy integrates well into MSE practices. Evidence for this can be found in the productive use of sociocultural animation in everyday practices when empowering adult clients with vision impairment and additional disabilities. The influence of social pedagogy can be observed in staff members' interest in developing their own professional abilities for the benefit of their clients' wellbeing in MSEs.
2. Sociocultural animation combined with knowledge of use of MSEs is a meaningful blend. It is applicable especially in social care and special education, where clients actively participate in the MSE in groups where the emphasis is on social interaction and empowerment rather than on simply engaging in individualized therapy sessions.
3. Sociocultural animation was described as a flexible and practical approach, which can benefit both MSE's accent on individual's needs and social pedagogy's emphasis on empowering togetherness. Social pedagogy's and MSE's aims are to increase self-determination, togetherness, emotional balance, communication and appreciation of other people.
4. Empowerment, as a result of sociocultural animation in MSEs, is seen as a developing process of obtaining basic opportunities (self-determination and self-support) for people with vision impairment and additional disabilities.

This is achieved by communication with staff members, use of creative multimedia and MSEs, that offer sensory experiences, joy and pleasure for both clients and staff members.

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The profile of children with VI and cerebral palsy: Association between severity of VI and motor impairment - Cathryn Crowle & Dr John Ravenscroft

Cathryn Crowle - Senior Occupational Therapist in Charge RIDBC Alice Betteridge School

Dr John Ravenscroft - Head, Institute for Education, Teaching & Leadership Moray House, The University of Edinburgh

Abstract

It is estimated that 70% of all children with vision impairment (VI) have an additional disability. The aim of this paper is to investigate the profile of combined vision impairment and cerebral palsy (CP) in childhood. The Gross Motor Function Classification Scale (GMFCS) is the internationally recognised classification of function for children with CP. However, there is inconsistency about the association between the severity of VI and GM- FCS Levels. This paper will examine studies that have used the GMFCS, in order to determine whether the severity of gross motor function has a significant association with vision impairment. Such information is necessary in order to provide a clearer profile of VI in childhood and inform future service delivery.

Introduction

It is estimated that 71% of all children with vision impairment (VI) have additional impairments (Ravenscroft, Blaikie, Macewen, O'Hare, Creswell, & Dutton, 2008). These may include a physical, intellectual, or additional sensory impairment such as a hearing loss. Children with both VI and physical disability face specific challenges and require specialised services. Included in this group are children with cerebral palsy (CP) and vision impairment (VI). CP is the most common additional disability found in children with VI and makes up over 50% of non-visual disabilities associated with VI (Glanzman & Ducret, 2003). In order to effectively provide educational services for this population it is essential to have current data relating to the prevalence and severity of both impairments.

The aim of this paper is to investigate the profile of cerebral palsy and vision impairment in childhood by looking at population-based studies, specifically describing the combined incidence of CP and VI. Of particular interest are studies using the Gross Motor Function Classification Scale, referred to as the GMFCS (Palisano, Rosenbaum, Walter, Russell, Wood, & Galuppi, 1997). The GMFCS is an internationally recognised classification scale for cerebral palsy and is outlined in Table 1. This paper will investigate whether the severity of gross motor function, according to the GMFCS, has a significant association with the severity of vision impairment.

Discussion

There have been many studies that have looked at the prevalence of disability in childhood, particularly vision impairment and cerebral palsy (Bhasin, Brocksen, Avchen & VanNaarden Braun, 2006; 4Child, 2008; Yeargin-Allsopp, Murphy, Oakley, & Sikes, 1992). However, these studies do not describe the relationship between these two disabilities or the severity of either impairment. The following discussion presents information from the literature on the prevalence of CP and VI in childhood, as well as the prevalence of CP combined with VI. Following this are studies that have used the GMFCS to describe the severity of motor impairment in CP, and the relationship of this to visual impairment.

Prevalence Rates of CP, VI and combined CP & VI

Metropolitan Atlanta Developmental Disabilities Study (MADDS) was the first US population-based epidemiologic study of the prevalence of intellectual impairment, CP, HI, and VI in school age children (10yrs old between the years 1985 & 1987). General prevalence rates found in the study were CP, 2 per 1000 live births, and VI, 0.6 per 1000 live births (Yeargin-Allsopp, Murphy, et al, 1992). It is not clear within this study what the definition for VI was except for only children with 'serious bilateral vision impairment' were included. This limited inclusion criteria possibly explains why the prevalence rate for VI is quite low.

In 2006, Bhasin., et al updated the MADDS figures and found the overall prevalence of CP was 3.6 per 1000 in 1996 and 3.1 per 1000 in 2000 and with reference to VI, it was 1.4 in 1996 and 1.2 in 2000. Results from the 4Child databases (4Child, 2008) in the UK recorded a similar rate for VI at 1.3 per 1000 live births, with nearly 40% severely impaired.

In Australia it is estimated that there are 5000 children with a VI, with 2300 children in NSW (Ravenscroft, 2008). For CP, 4Child recorded rates of 1 per 1000 live births. However, these figures do not provide details of combined prevalence, or descriptions of the severity of impairments. By not detailing the severity it makes it difficult to gain an overall profile of these children or anticipate their educational needs. The incidence of CP in Australia remains stable at 0.2% of the population, with approximately 700 families each year told their child has CP (Spastic Centre NSW, 2007).

To gain an understanding of the severity of motor impairment likely for these children with CP, it is useful to look at the reported distribution rates on the GMFCS from Europe, the UK and Canada. Studies report distribution ranges of CP in Levels I to III (mild-moderate) between 60% and 75% of children, and ranges for children in Levels IV and V (severe) between 25% and 40% (Beckung & Hagburg, 2002; Palisano et al. 2000; Himmelmann et al 2006; Nordmark, 2001).

Most studies that consider the combined prevalence of CP and VI do not provide descriptive information on the severity of motor impairment. For instance, Flanagan., et al (2003) in a study of 76 children with a VI in Belfast, found a childhood prevalence of 1.61 per 1000. Importantly, only 21% had isolated VI. For those with complicated VI, CP occurred in 33%, and was the most common additional medical problem present. Ravenscroft (2008) in a study of 850 children with a VI in Scotland, found 15% to have CP.

Much higher prevalence rates of combined CP and VI were found in a study by Rogers (1996) of 199 children with VI. This study reported that only 35% of children had uncomplicated VI and 65% had additional and usually multiple pathology. Interestingly, 53% of those with complicated VI had CP. Multiple disability (two or more disabling conditions in addition to VI), affected half the entire childhood vision impairment population. Among those with complicated VI, Cortical Vision Impairment (CVI) was the commonest visual tract finding, affecting 49%.

CVI is a term that may be used to describe a condition when an eye exam cannot explain an individual's significant lack of functional vision. Children with CVI may have good visual acuity but may not be able to make sense of what they see as they have visual problems that arise from the visual pathways and processing centres of the brain. Characteristics of CVI include: distinct colour preferences, attraction to movement, visual latency, visual field preferences, difficulties with visual and environmental complexity, impaired recognition of people, shape and objects, light gazing, atypical visual reflexes, difficulties with visual novelty, and absence of visually guided reach (Roman-Lantzy, 2006; McKillop & Dutton, 2008). Several terms exist that describe this visual dysfunction, such as cortical visual impairment, cerebral visual impairment, neurological visual impairment, and brain-damage related visual impairment.

Similar to Rogers (1996) study, the association between CP and CVI is also described by Warburg (1994) who reported that 50% of patients with optic nerve atrophy or with CVI have epilepsy, CP or both.

In summary, there is agreement that the incidence of additional impairments in children with VI is high. In the same way, in children with CP, the likelihood of visual difficulties is well documented, particularly the incidence of CVI. However, none of these studies investigates the severity of VI in relation to the severity of CP or motor function, and there is no mention of classifying the types of CP using the GMFCS.

VI Related To GMFCS

Only a small number of studies have considered VI as a function of GMFCS. Two of these are in agreement that there is a high correlation between the Level of GMFCS and the severity and type of VI. Another study found that the severity of motor disability was not related to the severity of VI, HI or epilepsy.

(i) Venkateswaran & Shevell (2008)

This study divided GMFCS scores of children with spastic quadriplegic CP into mild (Levels I-III) and severe (Levels IV-V). Visual status was grouped as normal or abnormal, and divided into mild/moderate (strabismus, refractory error, amblyopia or nystagmus) and severe (cortical blindness, and optic atrophy). However, the authors do not provide a definition of VI for inclusion in the study. Again, by not providing this definition, there is difficulty in obtaining an accurate picture over and above generalities and thus specifically targeting resources in order to provide comprehensive support.

The authors hypothesized that a severe visual outcome would be associated with severe GMFCS, and other conditions such as severe periventricular leukomalacia (PVL) & microcephaly.

The study included 92 patients with spastic quadriplegia (80% with a VI), over a 14-year interval. The results demonstrated comorbidities of VI, HI, epilepsy and assisted feeding occur in a high proportion of children with spastic quadriplegic CP. However, no significant association was found between the presence of VI and GMFCS severity (95% CI, p=0.071), or other conditions investigated. Venkateswaran., et al (2008) specifically state that 'a GMFCS of Level IV or V was not statistically associated with VI' (p.218). They concluded that the severity of motor disability is not related to the likelihood of having VI, or to the chances of having a hearing impairment or epilepsy. However, it must be noted that this study only included children with one type of CP, spastic quadriplegia. It is therefore not a true indication of the population of children with CP, and the results should only be taken as relevant for children with spastic quadriplegia. Furthermore, this study only considered whether children with Level IV and V CP were more likely to have a VI. It did not attempt to correlate severity of VI with GMFCS levels.

(ii) Ghasia, Brunstrom, Gordon & Tychsen (2008)

This study included 50 children with CP, aged 2-19.5 (mean age 5.6 years), at Washington University Medical Centre from 2000 to 2006. Children were sorted into GMFCS levels to allow 10 in each level. The research goal was to determine whether children with different severities of CP, as defined using the GMFCS, had different degrees or types of visual dysfunction (e.g. myopia, binocular fusion, gaze dysfunction, optic neuropathy or CVI).

The authors found that children with CP have abnormalities of the visual pathways at rates exceeding those detected in neurologically normal children. For each GMFCS level, children had visual deficits at rates 10 to 70-fold higher than those reported in general paediatric population of an equivalent age. They concluded that the likelihood of debilitating visual deficits was greater in children

with higher GMFCS scores, independent of gestational age, as outlined in Table 2.

Ghasia., et al (2008) also report that children with GMFCS V were at greatest risk for high myopia, absence of binocular fusion, dyskinetic strabismus, more severe gaze dysfunction and optic neuropathy or CVI. Dyskinetic strabismus and severe gaze dysfunction were rare or absent in Level I children (Ghasia., et al, 2008). This is emphasised by Buckley & Seaber (1981) who state that dyskinetic strabismus is seen exclusively in cerebral palsy patients, and by Jackson, Castleberry, Galli, & Arnoldi, (2006) who report that infantile strabismus is significantly more common in children with CP than in the general paediatric population.

When categorised by anatomic physiologic CP subtype, children with more severe types of CP once again had the most significant visual deficits. Diplegic children were more often hyperopic and esotropic but had the highest prevalence of fusion and stereopsis. In contrast, children with quadriplegic and mixed CP (dykinetic, athetoid, hypotonic and ataxic) tended to have high myopia, CVI, dyskinetic strabismus, and severe gaze dysfunction. Buckley., et al (1981) also found people with CP that have dyskinetic strabismus have an athetoid component to their disorder.

The prevalence of dyskinetic eye movements in children with dyskinetic CP is also highlighted by Jan, Lyons, Heaven, & Matsuba (2001) who state that most children with dykinetic CP also have a dyskinetic eye movement disorder. This can be severe enough to mimic blindness, despite normal ocular findings. Jan & Lyons (2001) report on a group of 14 children whose CP is associated with severe dyskinetic eye movements. Eye movement disorder is defined as 'an impaired ability to plan and execute voluntary eye movements to the intended pattern and location, and to maintain fixation' (Jan, Lyons., et al, 2001).

Ghasia., et al (2008) conclude that overall, children with milder CP are similar to the neurologically normal children in the general population who have infantile or refractive strabismus, whereas children with more extensive CP have deficits that are either uncommon or never seen (e.g., dyskinetic strabismus) in the general childhood population. This highlights the need for highly specialised services.

(iii) Himmelmann, Beckung, Hagberg, & Uvebrant (2006)

The third study this paper examines included 411 children aged between 4 and 8 years, diagnosed as having CP. Information on accompanying impairments was available and documented for 96% (395) of these children. The authors found a strong correlation between the GMFCS Levels to at least three accompanying impairments present in CP. These accompanying impairments were learning disabilities, VI and epilepsy.

The proportion of children with accompanying impairments increased significantly in line with GMFCS levels, and this was found to be statistically significant (p<0.001). For instance, in Level I children, 79% had no accompanying impairment, contrasting with 6% of those at GMFCS Level V. Furthermore, at level V, 89% of children had two or more accompanying impairments.

It is important to consider the definition of VI used in this study as severe VI was documented in 19% of children. VI was thus defined as functional blindness or acuity after correction of no more then 6/18 (Snellen). There is no mention of the incidence of other forms of visual dysfunction such as CVI, which is reported to be common in CP (Blaikie, 2003). Of most significance was the finding that 83% of children with quadriplegia had a severe VI.

Based on the findings of these studies there is some evidence to suggest severity of visual dysfunction is related to the severity of motor impairment in CP, using the GMFCS. However, it is difficult to draw firm conclusions based on such a small number of studies. However, CVI is described as common across all Levels of CP.

One reason why there are so few studies that have addressed visual acuity as a function of GMFCS, is the difficultly accurately classifying and describing the spectrum of visual disorders encountered. Examinations are also labour intensive and time consuming even for skilled examiners, as children with multiple disability are difficult to assess (Ghasia., et al, 2008).

Other challenges include the lack of a consistent definition of VI across studies, or use of clear categories to document and describe the severity of visual dysfunction. Ghasia., et al (2008) discuss the need for standardised clinical documentation across examiners in CP studies with clearly defined ophthalmic CP nomenclature, especially for CVI, optic neuropathies, and CP gaze dysfunction. Although not described in the body of their paper, Ghasia., et al (2008) attempt to address this issue in their Appendix. This difficulty in describing and classifying accompanying impairments may also be true of studies focussing on VI, which are unlikely to classify or describe the severity of motor impairment in cerebral palsy.

Implications and Recommendations

There is agreement in the literature that the incidence of additional impairments in children with VI is high. In particular, CP has been described as the most common additional disability.

There is also some evidence in the literature that the severity of VI is associated with the severity of gross motor impairment, based on levels in the GMFCS. So, children with more severe forms of VI, often involving CVI, are also likely to have severe problems of posture and movement. Service providers therefore need to offer a

highly specialised team approach to ensure the complex needs of these children are met.

So, what is the typical profile of VI in childhood? This paper suggests it is one in which additional disabilities such as CP are common and CVI is frequent. Other impairments documented in the literature, although not discussed in this paper, include hearing impairments, epilepsy and learning difficulties (Bhasin., et al, 2006; 4Child, 2008; Yeargin-Allsopp., et al, 1992; Himmelmann, 2006). These comorbidities all lead to complex educational needs.

The majority of children with CVI improve, but greatest improvement is seen in those who have had intervention based on a systematic approach relating to the key features of CVI. Early intervention is critical (Roman-Lantzy, 2006) and a team approach in CVI is necessary. For example, careful positioning of a child's whole body will assist in gaining the best head position, which in turn can reduce some of the effects of CVI (Blaikie, 2003).

Roman-Lantzy (2006) urges educational professionals working with children with CVI to be aware of the complex nature of this disorder. A different rehabilitation model is needed for children with CVI, than for children with ocular visual impairments. As improvement in vision is likely, educators have a chance to bring about lasting improvements in functional vision.

McKillop., et al (2008) describe the need for an education revolution, as the incidence of CVI in children is increasing. CVI is now the commonest cause of VI in children and visual acuity, although often reduced in CVI, does not necessarily reflect functional vision (McKillop., et al, 2008). By focussing on functional vision as the criteria for services, the needs of these complex children will more likely be met.

In the field of special education, best practice for assessment and intervention still needs to be developed. In particular, there is a need for evidence-based interventions and educational practices (McKillop., et al, 2006). The training and expertise of many vision educators' centres on children with ocular visual impairments. Add to this the challenge of the greater incidence of CVI in children with CP, particularly Level IV and V children, and there is also the need for specialist skills and understanding of movement and posture.

Future Research

More research into the current numbers of children with VI and cerebral palsy is needed. Descriptions of the severity of motor impairment, based on the GMFCS, and the types of VI likely in each level would provide valuable information about this population. Access to national registers (where they exist) for both vision and cerebral palsy, will make this research possible. Following on from this, further research into best practice guidelines for education for children with VI and additional disabilities, particularly CP is recommended.

Table 1. GMFCS descriptors for children aged 6-12 years

Level I	Children walk and climb stairs without limitation. Can run and jump, but speed, balance and coordination are impaired.
Level II	Children walk independently, climb stairs holding rail, but experience limitations walking on uneven surfaces, inclines, and in crowded or confined spaces.
Level III	Children walk on a level surface with an assistive mobility device. May propel a wheelchair manually but are transported when traveling for long distances.
Level IV	Children may walk short distances on a walker with close supervision/assistance. Rely on wheeled mobility.
Level V	Physical impairment restricts voluntary control of movement and ability to maintain head control and trunk postures. No independent means of mobility and are transported.

Table 2. Visual deficits related to GMFCS Levels

Visual Deficit	GMFCS Level I	GMFCS Level II	GMFCS Level III	GMFCS Level IV	GMFCS Level V
Binocular vision	50%	50%	70%	70%	70%
Amblyopia	70%	70%	---	---	---
Afferent visual pathways	30%	---	---	---	70%
Oculomotor deficits	60-70% intermittent	60-70% intermittent	40% constant deviation	40% constant deviation	40% constant deviation
Gaze disorders	30% mild gaze disorder	---	---	---	30-40% severe gaze disorder
CVI	16%	16%	16%	16%	16%
Optic neuropathy	10%	---	---	---	60%

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In the front seat: Producing an expert-driven interview tool to examine the everyday work of teachers of students with vision impairment - Jane Emily Brown

PhD Candidate Griffith University

Abstract

This study was designed to investigate the daily work of teachers of students with vision impairment in Queensland. As part of this study, school administrators and specialist teachers involved in the education of students with vision impairment in Queensland's capital city, Brisbane, were invited to participate in two preliminary research activities. These experts took part in a focus group discussion and provided subsequent individual written feedback. This article describes the procedures and outcomes from these two preliminary research activities that shaped the content included in the interview tool's fixed-response items.

Keywords: vision impairment, teachers of students with vision impairment (TVIs), research interview tool, expert participants.

Introduction

Documentation about the everyday work of teachers of students with vision impairment in Australia is sparse. Hence, in this study, the researcher aimed to examine the changing roles and responsibilities of teachers of students with vision impairment (TVIs) in Queensland, Australia. TVIs refer to qualified specialist teachers who have expertise and practical experience in the field of visual impairment (Spungin & Ferrell, 2000; Tuttle & Ferrell, 1995). Although a small number of studies have been conducted in North America on the day- to-day role and practice of TVIs (e.g., Dote-Kwan, Chen, & Hughes, 2001; Spungin & Ferrell, 2010; Suvak, 2004; Wolffe et al., 2002), little research has been conducted in Australia. However, lists of teacher competencies and responsibilities have been compiled, along with documents outlining standards and expectations (e.g., Lamb, 1997; South Pacific Educators in Vision Impairment, 2004).

This article details the process used to build an interview tool with ecological validity to aid data gathering. In other words, since no tool existed to capture the scope of the unique and extensive roles performed by TVIs, a suitable interview tool was devised using input from expert professionals in the field. The tool aimed to examine the everyday work of TVIs at Queensland government primary and secondary schools.

Critical input from expert professionals (administrators and TVIs) was sought through two preliminary research activities: (a) a focus group discussion and (b) written feedback. Through participation in these preliminary research activities, fixed-response options within an interview tool were created that contained local and

relevant contextual information. This tool then allowed the researcher to gain authentic role descriptions and accounts of daily practice by conducting one-on-one phone interviews with TVIs across the state of Queensland (see Brown & Beamish, 2011).

Method

Recruitment of expert participants

Following ethical approval from the Queensland Government and Griffith University, a list of administrators and teachers working in the area of vision impairment throughout the state was accessed from Queensland's Disability Services Support Unit. Since identification and recruitment of participants for a focus group discussion can greatly impact on its success (Morgan, 1993), purposive sampling was used to select participants to take part in preliminary activities (Vaughn, Schumm, & Sinagub, 1996). Participants were selected based on two clear criteria (Gay, Mills, & Airasian, 2009): (a) teaching qualification in the area of vision impairment; and (b) at least three years' experience teaching students with vision impairment. It was predicted that approximately 15- 20 Brisbane-based professionals would meet this criteria and have capacity to attend the group discussion in-person.

A field-based sampling procedure was put in place to engage interested experts. An information and package about the study (including consent forms) was mailed directly to all Brisbane-based administrators, Advisory Visiting Teachers (AVTs), and TVIs on the contact list (n = 16). The recruitment process produced six interested participants. It was anticipated that recruiting these participants based on the criteria would provide rich and detailed information 'with both depth and breadth of experience' (Brotherson, 1994, p. 110).

Five of the six experts in the group were female. A majority (4/6) were aged between 31 years and 45 years. One was aged 46-50 years, while another was 56-60 years of age. Half of the expert group were administrators (i.e., Head of Special Education Services) in primary (1/6) and secondary schools (2/ 6), two were TVIs (based in early intervention and at a secondary school), and another was a Brisbane-based AVT. Most reported an undergraduate qualification in vision impairment; four also had Masters degrees. On average, expert participants had 12 years' experience teaching students with vision impairment. Student caseloads of the expert group varied greatly, from 6 to 65 students with vision impairment.

Development of the interview tool

Focus group discussion procedure

A focus group discussion was selected as the initial preliminary activity because it could collect good quality data (Vaughn et al., 1996). Since focus group discussions 'should be scheduled at the participants' convenience' (Brotherson, 1994, p. 110), participants were contacted via telephone and email to determine a suitable date and

time to conduct the focus group discussion. After considering each participant's preferences and availability to participate in the discussion on the dates provided, the researcher relayed details regarding the particulars of the focus group discussion via email.

Experts who participated were key contributors and stakeholders in the discussion. The advantages of conducting a focus group discussion in this specialised study were numerous. Informal group interactions between participants were invited by the researcher which encouraged each participant's comments to be taken into account (Frey & Fontana, 1989; Puchta & Potter, 2004). A number of unanticipated and spontaneous responses to suggestions were also invited (Finch & Lewis, 2003; Greenbaum, 2000; Merton et al., 1990).

The purpose of the focus group discussion was to gauge up-to-date and relevant views from practitioners in the field of vision impairment in Queensland on their current roles and responsibilities. The specific goal of the discussion was to gain accurate content and language related to the proposed closed- interview items prior to piloting the proposed interview with specialist teachers in the field (Morgan, 1997). Following these initial preparations, the researcher designed a moderator's guide for the focus group discussion (Vaughn et al., 1996). The guide provided structure to the discussion (e.g., Finch & Lewis, 2003; Greenbaum, 2000) and included a script to ensure a relaxed, relevant, and focused discussion was maintained.

Conduct of focus group discussion

The researcher moderated the focus group discussion. Tables and chairs were positioned in a circular arrangement so that the moderator and focus group participants could see each other clearly. Such an arrangement encouraged interaction between focus group participants (Merton et al., 1990; Vaughn et al., 1996), facilitated equal access between each individual present (Vaughn et al., 1996), and decreased the authoritative role of the moderator (Merton et al., 1990).

The key components of the moderator's guide ensured participants contributed to the discussion through the sharing and exchange of information, and maximised the probability that relevant and meaningful information was gained in a structured and systematic manner. Initially, each participant was provided with a modified 6-step overview of the session extracted from the moderator's guide. Each fixed-response item was read out sequentially to participants (see Figure 1). Following each item, the moderator provided participants with two responses to the fixed-response items, based on relevant literature. At this point, the moderator encouraged individual participants to write his/her responses on the worksheet provided for each of the five items prior to engaging in group discussion.

- What does your role as a Specialist Teacher (Vision Impairment) involve?

- As a Specialist Teacher (Vision Impairment), what specific areas do you teach?

- Which aspects of your role as a Specialist Teacher (Vision Impairment) do you find challenging?

- Which factors allow you to be the best possible Specialist Teacher (Vision Impairment)?

- In your school setting, which factors prevent you from implementing 'best practice' as a Specialist   Teacher (Vision Impairment)?

Figure 1 Fixed response items within the interview tool

After participants recorded their initial ideas for each item, the moderator then invited participants to discuss each item in turn. Encouraging participants to record their ideas prior to discussion maximised participation from individual group members and increased the likelihood that the experts actually shared their unique beliefs and ideas, rather than simply agreeing with contributions made by colleagues (Greenbaum, 2000; Morgan, 1997).

Individual responses were open to group scrutiny as experts were invited to comment and brainstorm additional responses for each item. Participant responses were recorded using a laptop computer. The duration of the focus group was 1 hour and 15 minutes.

Outcomes from the focus group discussion

From the first through to the fifth item, the researcher analysed concepts and content generated and verified from the focus group discussion (see Appendix A). Content was compared to that responses gleaned from the literature in terms of length, concept repetition, and relevance. Some fixed-response options were re-worded for greater clarity, while others were eliminated where overlap was apparent.

Individual written feedback

Data resulting from the focus group discussion were supported and strengthened by the implementation of a supplementary method. The focus group discussion was followed by inviting experts (electronically and via mail) to provide individual written judgment on the content discussed in the focus group discussion in isolation. Helmer and Rescher (1959) propose a strong case for the 'informed expert' (p. 38). They argue that an informed expert could apply a 'large store of (mostly inarticulate) background knowledge and a refined sensitivity [to relevant issues] . . . to produce trustworthy personal probabilities regarding hypotheses in his [or her] area of expertness' (p. 38).

In this study, the pre-determined criteria applied to recruit suitably qualified and experienced experts ensured that select participants were informed and in a suitable

position to make professional and personalised judgments on the subject matter at hand. As Sharpe (1997) suggests, participants were invited to respond to the status of the response options 'with respect to reality' (p. 314). Providing experts with the opportunity to further refine the data collected in the focus group discussion served as verification prior to the content being used in the interview stage.

Upon receiving the response options for the five fixed-response items, expert participants were encouraged to use their professional judgment to reconsider each item's response options. The instructions provided to participants invited them to provide final feedback comments on the language used in the response options (Morgan, 1997) and to modify the wording of response options where appropriate. Gaining feedback from participants through individual judgment enhanced the study's reliability and maximised its validity (Morgan, 1997).

Outcomes from individual written feedback

Individual judgments were gained from experts through their written comments on the response options for each of the five fixed-response items. Participants recorded feedback on response options in terms of their intended message, clarity, and language. Alterations and additions suggested by participants for the fixed-response options also were considered by the researcher. After the researcher examined and scrutinised feedback from the individual judgments provided, final adjustments to the response options for the five fixed-response items were made (see Appendix B). The judgments provided by expert teachers further modified the construction of the fixed-response component of the interview tool.

Conclusion

Two carefully sequenced preliminary research activities (focus group discussion and individual written feedback) with field experts (n = 6) generated and refined content for an interview tool so that it accurately reflected Queensland's service provision and context. Though expert input, the interview tool's fixed-response options were shaped to include relevant content using everyday wording that was valid and reliable. Hence, the interview tool was suitable to be implemented with TVIs across the state (see Brown & Beamish, 2011). Incorporating the views, opinions, and feedback from qn expert group of practitioners ensured the interview tool contained fixed-response options for interviewees that were local, meaningful, and relevant.

Author note

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Appendix A: Closed-item responses brainstormed from the focus group discussion

What does your role as a Specialist Teacher (Vision Impairment) involve?

1	Liaising with Orientation and Mobility Teachers/Instructors
2	Teaching braille and braille skills
3	Teaching low vision aids
4	Developing advocacy skills for parents and children
5	Supporting students in the classroom to access learning
6	Liaising with outside agencies
7	Follow up programs for Orientation and Mobility
8	Up-skilling main school teachers
9	Adapting resources
10	Social skills
11	Daily living skills
12	Curriculum modifications - practical aspects
13	Modelling curriculum modifications to main school teachers
14	Providing information about environmental adaptations
15	Keeping informed about technology
16	Teaching peers about vision impairment
17	Encouraging main school teachers and school to have ownership for the VI students' learning
18	Sourcing tools
19	Writing submissions for funding
20	Access to the low vision clinic
21	Profiling – Education Queensland forms
22	Expanded Core Curriculum
23	Concept development
24	Community access
25	IEP [Individual Education Plan] facilitation
26	Vision screening identification- print size - functional vision
27	Encouraging independence

28	Liaising with school administration
29	Access to work opportunities
30	Providing information and support to parents and children
31	Attending professional development

As a Specialist Teacher (Vision Impairment), what specific areas do you teach?

1	Social interaction skills
2	Functional academic skills
3	Braille and pre-braille skills, print
4	Functional literacy
5	Technology - access and evaluation
6	Functional numeracy
7	Play and social skills
8	Independence
9	Disability specific recreation and sport
10	Spatial awareness
11	Daily living skills
12	Study skills
13	Information gathering about the environment (e.g., NBC, WESST)
14	Follow up Orientation and Mobility) and therapy
15	Organisation skills
16	Self-advocacy and independence
17	Understanding own vision impairment and articulating it
18	Knowing and articulating the impact of vision impairment
19	Research skills - computer and library
20	Processing skills - touch typing
21	Disability specific equipment
22	Listening skills
23	Sharing and turn-taking, anger management
24	Concept development

Which aspects of your role as a Specialist Teacher (Vision Impairment) do you find challenging?

1	Liaising with classroom teachers
2	Access to liaising with other vision impairment-related professionals (such as AVT's, Orientation and Mobility teachers/instructors)
3	Advocating for students
4	Prioritising students needs
5	Teacher understanding of needs of students with vision impairment
6	Perception of the support teacher
7	Time management - fitting it all in
8	Behaviour management - anger, apathy
9	Keeping up with technology
10	Encouraging administration to provide funding
11	Asking people for funding
12	Lack of central support for equipment and technology
13	Repairing equipment
14	Someone to look at and evaluate equipment
15	No central referral system
16	Teachers who do not want VI students in the classroom
17	Liaising with parents and expectations
18	Parent expectation
19	Students not wanting to be different
20	Lack of VI teacher training
21	Lack of Orientation and Mobility, therapy, and funding
22	Lack of professional development
23	Restricted access to brailled, large print or taped books
24	Disintegration of VI services
25	Accepted traditions and expectations
26	Workplace health and safety for VI students
27	Provisions for other students in the setting

Which factors allow you to be the best possible Specialist Teacher (Vision Impairment)?

1	Opportunities to participate in professional development (VI)
2	Supportive leadership from HOSES [Head of Special Education Services]/Principals/Deputy Principals
3	Access to a centralised system
4	Family support
5	Teacher and staff support
6	Enhanced staffing
7	Enhanced teacher, funding and resources
8	Flexible timetabling
9	Other agencies' support
10	Working with other people with specialist training
11	Having specialists visit the school
12	Attitude of others in the school
13	Expectation of the school as a whole
14	Support from the low vision clinic
15	Great teacher aides
16	Orientation and Mobility instructors
17	Volunteers
18	Modern technology and facilities
19	Internet ideas for VI worldwide
20	Viewing other VI programs
21	Positive attitude towards teaching
22	Students having a positive attitude

In your school setting, which factors prevent you from implementing 'best practice' as a Specialist Teacher (Vision Impairment)?

1	Number of students with vision impairments in your caseload
2	Resources available
3	Outcomes-based curriculum
4	Demands on paperwork and teacher time
5	Activities that fit into main school - timetabling
6	Staff attitudes
7	Expectation for high academic results
8	Lack of funding
9	Lack of human and physical resources
10	Lack of specialists staff in the school
11	Lack of a central resource base
12	Increase in students with multiple impairments
13	Lack of ongoing professional development
14	Lack of opportunities to financially attend professional development
15	Lack of time to implement ECC [Expanded Core Curriculum]
16	Difficulty in the working relationship between the unit and school
17	Lack of time in a school day
18	Resistant or unsupportive families
19	Teachers' extra curriculum activities
20	Difficulty utilising non-contact time in the timetable constraints
21	Technology difficulties
22	Lack of technology support
23	Relief and contract staff without training

Appendix B: Final content included in the interview tool's fixed-response options following individual written feedback

What does your role involve? (Yes/No)	
	Assessing each student's skills in areas of the Expanded Core Curriculum
	Completing Education Queensland's 'Education Adjustment Profile' (EAP) for individual students, involvement in developing and implementing an Individual Education Plan (IEP) for each student and/or involvement in developing and implementing a Senior Education Training Plan (SETP) for students with vision impairment in Years 10/11/12
	Keeping abreast of information regarding technology (including attendance at seminars and displays specifically related to technology) **and writing submissions/applications for funding for equipment/resources**
	Liaising with colleagues, outside agencies (such as Royal Blind Foundation), **Orientation and Mobility Teachers/Instructors, school administrators and the Paediatric Low Vision Clinic**
	Participating in professional development opportunities, in particular, conferences and workshops related to educating students with vision impairment
	Providing knowledge and advice to school personnel, parents and students about: • **individual student needs** • **developing advocacy skills for parents** (for example, modelling appropriate curriculum modifications to mainstream classroom teachers and providing information about environmental adaptations) • **the impact and limitations imposed by vision impairment**
	Supporting students in the mainstream school and modifying and adapting resources to enhance students' participation within the regular curriculum and extra-curriculum activities
	Teaching pre-braille skills, braille literacy, and braille numeracy
	Teaching the Expanded Core Curriculum, including: • compensatory academic skills [including concept development, spatial understanding, study, and organisational skills, speaking and listening skills, and adaptations to access the core curriculum]

What does your role involve? (Yes/No)	
	• orientation and mobility [within the school grounds] • social interaction skills • independent living skills • recreation and leisure skills • career education • use of assistive technology • functional vision assessment/visual efficiency skills
	Other – please specify:

Which aspects of your role do you find difficult? (Yes/No)	
	Continuously advocating for student needs and changing unrealistic community perceptions and expectations of students with vision impairment
	Gaining administrative assistance to request funding from school administration and external agencies
	Gaining direct access to liaise with other professionals in the field of vision impairment (such as Advisory Visiting Teachers and Orientation and Mobility Teachers/Instructors), **in addition to:** • **limited Orientation and Mobility and therapy services for students** • **limited access to Orientation and Mobility and therapy services**
	Having limited time to liaise with mainstream classroom teachers and other staff regarding: • **knowledge about the needs of students with vision impairment** • **their role to assume responsibility for students with vision impairment in the regular classroom, as an integral part of maximising and enhancing student learning** • **the role of the specialist teacher (vision impairment)** • **the difficulties they may experience teaching student/s with vision impairment in the regular classroom**

Which aspects of your role do you find difficult? (Yes/No)	
	• the need to gain adequate geographical environmental adaptations to ensure workplace heath and safety standards for students with vision impairment
	Lack of opportunities to participate in professional development, in particular: • conferences and workshops related to educating students with vision impairment • limited availability of specific information related to vision impairment and effective teaching strategies • keeping up-to-date with technology
	Lack of sufficient teachers trained and qualified in the area of vision impairment
	Not having a central referral system (Government Body) and lack of central support for funding, assessment, access to braille, large print or audio-taped books/materials, evaluation and repair of equipment and technology
	Providing realistic educational information regarding the limitations imposed by the nature of vision impairment for parents
	Teaching students who are reluctant to use alternative strategies to facilitate independence
	Other – please specify:

What would allow you to be the best possible Specialist Teacher? (Yes/No)	
	Access to a centralised service system for educating students with vision impairment
	Enhanced funding, staffing, and resources from Education Queensland, ongoing support from external agencies and being able to access volunteers to enhance student learning and participate in fundraising activities
	Gaining access to modern technology and facilities and gaining support from a low vision clinic and resource library, for books and related technology

What would allow you to be the best possible Specialist Teacher? (Yes/No)	
	Having additional specialist staff visit the school regularly to work with students with vision impairment (such as Orientation and Mobility Teachers/Instructors, Advisory Visiting Teachers and Therapists)
	Observing students improve and develop, both socially and emotionally, enjoying working with students and their families and teaching students who have a positive attitude towards school, learning, and life
	Opportunities to participate in professional development, in particular: • **workshops and conferences related to educating students with vision impairment** • **opportunities to view and share programs with colleagues from other schools** • **accessing the internet to gain worldwide information about vision impairment and related educational services**
	Supportive administrative leadership from Heads of Special Education Services (HOSES)/Principals/Deputy Principals, including flexible school timetabling to cater for the educational needs of each individual student with vision impairment
	Teaching students whose families support and understand the educational needs of the student with vision impairment
	Working with school staff (administrators/teachers/teacher aides) **who have positive attitudes and expectations towards students with vision impairment, support the role of the specialist teacher and also have specialist training and qualifications in the area of vision impairment**
	Other – please specify:

Which specific areas do you teach? (Yes/No)	
	Expanded Core Curriculum Areas: • compensatory academic skills [including concept development, spatial understanding, study and organisational skills, speaking and listening skills, and adaptations to access the core curriculum] • orientation and mobility [within the school grounds]

Which specific areas do you teach? (Yes/No)	
	• social interaction skills • independent living skills • recreation and leisure skills • career education • use of assistive technology • functional vision assessment/visual efficiency skills)
	Follow-up and implementation of programs provided by specialist staff (such as Orientation and Mobility Teachers/Instructors, therapists and para-medical therapists)
	Functional numeracy skills (including the abacus) **and functional literacy skills**
	Information gathering about specific geographical environments through exploration and discovery methods
	Information processing skills (including keyboarding skills and using electronic books)
	Pre-braille and braille skills **(including the English Braille Code and other codes, such as Music and LOTE [Languages Other Than English])**
	Specific information regarding each individual student's vision condition/s and teaching each student how to identify and articulate the impact of his/her vision impairment
	Study and research skills on computers (including the internet) **and in libraries** (including electronic cataloguing systems)
	Use and evaluation of disability-specific equipment (such as assistive technology software/hardware and optical and non-optical low vision devices)
	Other – please specify:

Editor's Choice: Using Accessible Media and Assistive Technology to Improve Learning Outcomes - Tim Connell

Managing Director - Quantum Technology Pty

Over the last 15 years we have seen a dramatic increase in the range of educational technology options for using and creating information and for providing new tools to students to enhance reading, writing and learning. The rate of adoption of these new technologies has varied greatly between countries but there is no question that the many software and hardware options available have had the greatest impact on students with a print disability. The term 'print disability' is defined by the Australian Publishers Association as;

> 'people with print disabilities cannot read printed or text material, either because they cannot see the text, cannot hold a book or turn pages, or have a 'perceptual' disability such as dyslexia. They cannot read text unless it is copied into a format accessible to them'.

There is a wealth of anecdotal evidence supporting the use of technology for students with a print disability. For the last 30 years we have witnessed nothing short of a revolution in the opportunities blind and vision impaired students have to participate equally in education as new technology options involving speech, braille and magnification have become commonplace. Supporting the anecdotal evidence has also been evidence-based research, confirming the importance of introducing technology options to blind and vision impaired children at the earliest possible age.

However, this is not the case for students with dyslexia. While the anecdotal evidence is just as strong, there has been little formal research conducted and this has contributed to a much lower uptake of technology options that assist the dyslexic student. A comprehensive new study has just been completed in the United Kingdom which will hopefully go some way in addressing this imbalance. Titled the 'Accessible Resources Pilot Project' it was completed in December 2010 and the final report has just become available.

The project was funded by the UK Department for Education and was overseen by a Steering Group which was chaired by the Department for Education and included representation from Royal National Institute for Blind People, the British Dyslexia Association, Dyslexia Action, and the Publishers Licensing Society supported by other publishing industry representatives. The report comprises an extended Executive Summary that can be used to communicate high level results to a wide audience as well as detailed explanation, results and analysis in the body of the report.

This project was conceived to assess whether the provision of textbooks and teaching materials as electronic files, along with technologies to convert and 'read' them to print impaired pupils and staff in schools and local authorities that support

them, could provide a new and sustainable model. It is one of the first studies to include both vision impaired and dyslexic children and in doing so highlights the commonality of needs between these two groups in being able to access information in alternate formats.

The project found 'that making teaching materials available to print impaired pupils in an appropriate electronic form along with access technologies to read them can make a significant difference to their reading, writing, confidence, development and inclusion.'

Operating within the terms of the UK Copyright laws, 132 textbooks were converted into structured electronic files in MS Word format using a standard specification, and these were made available to the participating schools and specialist alternate format producers. This involved setting styles for headings and other content, using a standard 18-point font for standard text, modifying the layout into primarily a linear flow and including image descriptions. Students were provided with a range of software options specific to their needs and laptop computers. Some students were able to use the technology at school only and some were able to use it at home as well.

It was found that the impact on dyslexic pupils for reading, writing and achievement was higher than for vision impaired pupils. It was proposed that this was because vision impaired pupils are more used to using technology to assist their everyday school activities. The impact on vision impaired pupils was also higher for confidence, probably because it was building on existing skills whereas the dyslexic pupils had less previous exposure and experience using technology.

Evaluation of the results was led by EA Draffan from the University of Southampton. Questionnaires, face-to-face interviews with both staff and pupils, and online data captured from information gathered throughout the project were used. The variety of schools involved in the project gave extremely useful comparisons. In particular, it was found that those schools with a local champion, a coordinated approach and local IT support were best able to adapt and benefit most from the technology and electronic files.

There are some key findings and recommendations that should be of interest to everyone in Australia involved in the education and support of students with print disabilities. A full copy of the report can be found at http://www.quantumrlv.com.au/Education--Training.html

The education of students with vision impairment in Papua New Guinea: A tentative review of the literature – James Aiwa & Paul Pagliano

James Aiwa Doctoral Candidate - James Cook University

Associate Professor Paul Pagliano - School of Education James Cook University

Abstract

This is a tentative review of the literature because of the very limited amount of published information available on the education of students with vision impairment (VI) in Papua New Guinea (PNG). Information that is available tends to be general, dated and lack rigour. The lack of literature is partly due to the PNG context: a complex, impoverished, and diverse nation (geographically, culturally and linguistically) with almost overwhelming challenges that directly impact on education. With roughly half the 6.2 million-population under 22, overall attendance, especially in secondary school, remains distressingly low. Despite there being a well-established Government education policy to support the inclusion of students with VI the reality is only a small percentage of the projected eligible students actually receive specialist services. Using an educational definition of VI to help read between the lines, our conjecture is that, as the small number of students who do receive support services are mostly Braille using and functionally blind, large numbers of children with VI are not being identified, particularly those with low vision. Urgent research is therefore needed to clarify numbers and to find out what is actually happening to children with VI in PNG. Given the International Council for Education of People with Visual Impairment (ICEVI) has identified PNG as a proposed focus country for their global campaign on education for all children with visual impairment, this research is both timely and necessary to drive policy forward, to stimulate action and to monitor progress.

Introduction

Very little published information about the education of students with VI in PNG is available and any that is tends to be general, dated and lacking in rigour (Josephs, 2000). To better understand the current state of education of students with VI it is therefore necessary to take into account the PNG context. This is because the background situation has had such a powerful effect on shaping the provision of education services.

PNG is an extremely complex and diverse nation with almost overwhelming challenges that have directly impacted on education. These challenges include problems with communication, socio-cultural multiplicity, historical influences, governance, infrastructure, transportation, poverty, and attitudes towards people with disability, accessibility, specialist resources and training. After outlining important background information on PNG, a general overview of education in PNG is given

followed by a brief depiction of special education and education services for students with VI. The paper ends with a final discussion, conclusion, and recommendations.

Background

The nation of PNG occupies the eastern part of the large island of New Guinea. The western part of the island is the Indonesian province of Irian Jaya, also known as West Papua. The name Papua, a Malay word for frizzled Melanesian hair, was coined by the first recorded European navigator, Don Jorge de Meneses, between 1526 and 1527 (Bureau of East Asian and Pacific Affairs [BEAPA], 2010). Eighteen years later the Spaniard, Inigo Ortiz de Retes, named the island New Guinea, because he thought the inhabitants resembled those found on the African Guinea coast. As a consequence, even the country's name is somewhat confusing because both Papua and New Guinea refer to parts both inside and outside the national borders (BEAPA, 2010).

PNG achieved self-government on the 1st December, 1973 with full independence from Australia on the 16th September, 1975. The country is situated just north of Australia (with part of Queensland, the island of Saibai, only 4 km from the PNG mainland). In all, PNG comprises 600 islands and covers 462,840 square kilometres of land (about 16% of the size of Australia). The country is divided into four regions: Southern, Highlands, Islands and Momase; 18 provinces, plus Bougainville Autonomous Region and the National Capital District, and several thousand local communities, many of them exceedingly isolated and accessible only by water, air or foot. This largely rugged, mountainous country is subject to regular earthquakes, volcanic eruptions and tsunami (BEAPA, 2010).

For the most recent census in 2000 the population was 5,190,786. Guesstimates for 2011, based on close readings of data from the CIA World Fact Book (2010), Papua New Guinea National Statistics Office (2000), Australian Government AusAID (2010) and Bureau of East Asian and Pacific Affairs (2010) have the population at 6.2 million. Upward of 820 different languages – 12.5% of the world's total (Holloway, 2004) are spoken in PNG – of which three are nationally recognised: English, Tok Pisin (Talk Pidgin) and Hiri Motu. The estimated median age is 21.8 (CIA World Fact Book, 2010; Papua New Guinea National Statistics Office, 2000). Approximately 82% of the population live in rural areas and practice subsistence-based agriculture, around 37% are below the poverty line, there is low life expectancy (66.24 years), and high infant mortality rates (3.34) (CIA World Fact Book, 2010; Human Development Indices, 2008; Australian Government AusAID, 2010; BEAPA, 2010). The large cities like capital Port Moresby have serious crime problems, corruption is rife and there is little infrastructure in place, which makes travel and communication expensive, difficult and time consuming (BEAPA, 2010).

Governance is dysfunctional:

PNG's biggest problem is neither its crime nor its corruption but a dysfunctional political system. The Australian-inherited Westminster system cannot cope with a bewildering political paradigm where MPs represent 820 languages and have no allegiance to the political party. The 109 members are essentially free agents who regularly cross the floor to vote with the opposition, resulting in 109 cross-purposes. As a consequence, until the most recent election in 2007, no prime minister in the 34 years of independence (since 1975) had served a full five-year term without being brought down in a no-confidence vote – survival, not policy tends to be the focus of PNG politics. (p.12, McKinnon, Carillet, & Starnes, 2008)**General overview of education in PNG**

Education in PNG can be traced back to the 1870s (p. 27, National Education Board Report, 2008) and post-colonial national education began from independence in 1975. With the introduction of a provincial government system in 1978, the provision of education to students to Year 12 became largely decentralised, and this decentralised approach has continued through to the present day. Nevertheless, the Department of Education retains its right to oversee the development of policy and remains directly answerable to the Minister for Education. In addition to government schools there are schools from six different religious denominations as well as privately run autonomous schools.

Even though money to support various education programs comes from many different international sources, in relative terms overall government spending on education appears to be in decline (Josephs, 2000). Despite a series of reforms guided by the first *National Education Plan 1995-2004* (Department of Education, 1997) and *Achieving a better future: A national plan for Education 2005-2014* (Department of Education, 2004) to improve enrolment figures school attendance is low, but improving. These two plans were developed in response to PNG being a signatory to the Jomtien Declaration, *UNESCO World Conference on Education For All* (1990) in Jomtien, Thailand and reaffirmed in Dakar, Senegal, 2000. The UN Millennium Development goal of achieving universal primary education by 2015, including children with disabilities, was adopted by PNG. Nevertheless, the government has entertained doubts as to whether such a goal is possible.

In the current economic climate, it is difficult to see how the second of these goals [Universal Primary Education by 2015] can be achieved within the time frame. However, every effort is being made for children to achieve a primary education. (p. 5, Department of Education, 2004). In addition, the National Education Board of the Department of Education explicitly identifies as part of its mission: 'to make education accessible to the poor and physically, mentally and socially handicapped as well as to those who are educationally disadvantaged' (p. 6, Department of Education, 2004).

A key strategy has been to develop a national education structure. This began in 1993 with the relocation of Grades 7 and 8 from Secondary to Primary school. With more than ten times as many Primary schools as Secondary schools this change had an enormous impact on educational opportunity especially for children in isolated areas. Government sponsored education now begins with Elementary (Elementary Prep, Elementary 1 and 2) for students aged 6 to 8; Primary (Grades 3 to 8) for students aged 9 to 14; Lower Secondary (Grades 9-10) for students aged 15 to 16; and Upper Secondary (Grades 11-12) for students aged 17 to 18. Children younger than 6 years may attend kindergarten or pre-school but these are not funded by the government. The Department of Education has given moral support but it does not provide finance, curriculum materials and training of preschool teachers. It has left the responsibility to communities, non-government organisations and provincial governments. Students at Elementary school are educated in their home language, whereas at Primary school a bilingual program is introduced with English becoming the major language of instruction. English then continues to be the major language of instruction through to the end of secondary school.

In 2006 there were 5,473 elementary schools with an enrolment of 330,713 students - of an estimated eligible 480,000 children. Despite there being elementary schools located in most small communities throughout the country, more than 30% of eligible children did not attend (Department of Education, 2006). By 2008 enrolment in elementary school had increased to 423,149 (p. 21, 2008 Statistical Bulletin), marking a substantial boost, the result of an increase in overall population, in school attendance and retention.

In 2006 there were 3,355 Primary schools but this number does not include 15 International schools and 83 Seventh Day Adventist schools. In that year the combined primary school enrolment was given as 658,940 students - of an estimated eligible 741,031 children (Department of Education, 2006). By 2008 this figure had similarly been raised to 719,259 (p. 32, 2008 Statistical Bulletin).

Attending lower Secondary school is even more problematic because, as of 2006 there were only 234 Lower Secondary Schools, and these are located in only the larger population centres. Furthermore, in order to be eligible to go into Grade 9 a student must pass a national examination. The same applies for entry into Grade 11. By the time a student gets to Grade 10 there are only 6 National High Schools and 45 Upper Secondary Schools (grades 11 and 12) (Philemon, 2009), 3 International High Schools and 4 Seventh Day Adventist High Schools. The 2006 total secondary school student enrolment was only 86,189 students, with the majority of these being in grades 9 and 10 (Department of Education, 2006). Enrolment figures for 2008 had climbed to 97,881 (p. 45, 2008, Statistical Bulletin).

According to the Department of Education (2004) class sizes are capped at 45 but it is difficult to know if this is the case in practice. Analysis of both the 2006 and 2008

enrolment figures indicate considerably more boys attend school than girls (2008 Grade 12 ratio of 4,573 females to 6,877 males), more students from higher socio-economic backgrounds who live in urban centres stay on at school, and disproportionally more able-bodied students than those with disabilities receive a full school education (p. 45, 2008, Statistical Bulletin).

Special Education in PNG

The UNESCO (1988) *Review of the present situation of special education* made a forlorn assessment of education for children with disabilities in developing countries, claiming 'less than 2%' receive special services of any kind (p.3). As the PNG Department of Education wrote: 'It was generally accepted that these children would remain at home in the village and be cared for by the community' (p. 105, The State of Education in Papua New Guinea, 2002). This UNESCO review, in conjunction with PNG government's decision to sign the UNICEF (1989) *Convention on the rights of the child* (signed 30th September 1990), prompted the Department of Education through its National Education Board to conduct its own survey and to come up with a blue print for future services. This became known as: *The national plan, policy and guidelines for special education* (Department of Education, 1993).

The National Executive Council (by Cabinet decision) adopted a policy in respect to Special Education in 1993, which was defined for Papua New Guinea in terms of all children with disabilities having the right to be enrolled in regular schools and all teachers having the responsibility to teach children with special needs within the context of the regular classroom. (p. 2, Papua New Guinea Country Report, 2008).

This PNG legislation was opportune as it matched the *Salamanca Statement and Framework for Action on Special Needs Education* adopted at the UNESCO World Conference on Special Needs Education: Access and Quality the following year in 1994.

From 1993 the Department of Education began a partnership with those charitable organisations actively involved in providing education services to children with disabilities to establish Special Education Resource Centres (SERC) across PNG. Currently there are 21 SERCs. The principal responsibility of each SERC is to provide support to students with special needs both at centre-based programs and in mainstream inclusive schools. Other duties include training and up-skilling of mainstream teachers and working with parents of children with disabilities in their homes and villages. Staff members are also involved in rehabilitation programs for youth and adults with disabilities in their villages.

SERCs employ both professionals and paraprofessionals. Professionals hold specialist qualifications in teaching, nursing, physiotherapy, speech therapy and rehabilitation. Most salaries are now paid for by the Department of Education. However, those who do not meet the Department of Education entry qualifications (Diploma in Teaching and or related qualifications acceptable to the Secretary of

Education) are paid by the sponsoring agency. Details of the 21 SERCs are shown in Table 1.

Table 1 Special Education Resource Centres in PNG

SERC and Location	Date Est	Mailing Address	Agency	Finance	No of Staff	Types of Programs
1. Callan SERC – Buka	2000	P. O. Box 85, Buka NS Ph:(675) 9739311 Fax: (675) 9739312	Catholic	Catholic Church NDOE* NBPD*	8	Inclusive Education Rehabilitation
2. St John Association for the Blind - Port Moresby	1982	P. O. Box 6075, Boroka NCD Ph: (675) 3251238 Fax; (675) 3254637	St John Ambulance Association	St John Association NDOE NBPD	10	Inclusive Education Rehabilitation Primary eye care
3. Callan SERC – Rabaul	1995	P. O. Box 1238, Rabaul ENBP Ph: (675) 9829738	Catholic	Catholic Church NDOE NBPD	12	Inclusive Education Training Rehabilitation
4. Mt. Sion SERC- Goroka	1982	P. O. Box 1068, Goroka, EHP Ph: (675) 7322 850 Fax: (675) 7323189	Catholic	Catholic Church NDOE NBPD	25	Inclusive Education Training Rehabilitation Primary Eye Care
5. Cheshire Homes - Port Moresby	1972	P. O. Box 1306, Boroko, NCD Ph: (675) 3255937 Fax: (675) 3235419	Board of Governors	BOG* NDOE NBPD	19	Residential care Inclusive education
6. Red Cross SERC	1974	P. O. Box 6545, Boroko, NCD Ph: (675) 3251374	PNG Red Cross	PNG Red Cross NDOE NBPD	6	Inclusive Education Elementary Training

SERC and Location	Date Est	Mailing Address	Agency	Finance	No of Staff	Types of Programs
		Fax: (675) 73259714				
7. Callan SERC – Aitape	1996	P. O. Box 35, Aitape, Sandaun Ph: (675) 8572228 Pax: (675) 8572107	Catholic	Catholic Church NDOE NBPD	8	Inclusive Education Elementary Education
8. Creative Self Help Centre	1992	P. O. Box 891, Madang, MP Ph: (675) 8523310	Board of Governors	BOD NDOE NBPD	12	Inclusive Education Elementary Education Rehabilitation
9. Callan SERC – Kiunga	1999	P. O. Box 42, Kiunga WP Ph: (675) 5481304	Catholic	Catholic Church NDOE NBPD	7	Inclusive Education Training Rehabilitation
10. Simbu SERC - Kundiawa	1997	P. O. Box 494, Kundiawa, SP Ph; (675) 7351036	Lutheran	Luth NDOE NBPD	9	Inclusive education Elementary Education
11. Callan SERC – Mendi	1999	P. O. Box 69, Mendi, SHP Ph: (675) 5491744 Fax: (675) 5491169	Catholic	Catholic Church NDOE NBPD	10	Inclusive Education Training
12. Morobe SERC – Lae	1975	P. O. Box 946, Lae, MP Ph: (675) 4722089 Fax: (675) 4723239	Board of Governors	BOG NDOE NBPD	12	Inclusive Education Elementary Education
13. Callan SERC - Mt. Hagen	1986	P. O. Box 1191, Mt. Hagen, WHP Ph: (675) 5422735	Catholic	Catholic Church NDOE NBPD	12	Inclusive Education Elementary Education

SERC and Location	Date Est	Mailing Address	Agency	Finance	No of Staff	Types of Programs
		Fax: (675) 5423042				
14. Callan SERC – Wewak	1992	P. O. Box 542, Wewak ESP Ph: (675) 8561081 Fax: (675) 8562924	Catholic	Catholic Church NDOE NBPD	30	Inclusive Education Training Elementary Rehabilitation
15. Callan SERC - Kundiawa	1997	P. O. Box 189, Kundiawa, SP Ph/Fax: (675) 7351047	Catholic	Catholic Church NDOE NBPD	8	Inclusive Education Rehabilitation
16. Callan SERC – Daru	2006	P. O. Box 59, Daru WP Ph: (675) 6459017	Catholic	Catholic Church NDOE NBPD	6	Inclusive Education Training
17. Callan SERC - Manus	2006	P. O. Box 49, Manus Manus Province	Catholic	Catholic Church NDOE	12	Inclusive Education Training
18. Callan SERC – Alotau	2006	P. O. Box 107, Alotau MBP	Catholic	Catholic Church NDOE	7	Inclusive Education Training
19. Callan SERC Kavieng	2008	P. O. Box 49, Kavieng New Ireland	Catholic	Catholic Church NDOE	4	Inclusive Education Training, CBR*
20. Callan SERC Kimbe	2008	P. O. Box 182, Kimbe West New Britian	Catholic	Catholic Church NDOE	4	Inclusive Education Training, CBR
21. Callan SERC Wabag	2008	P. O. Box 101, Wabag Enga Province	Catholic	Catholic Church NDOE	4	Inclusive Education Training

* BOG - Board of Governors, CBR - Community Based Rehabilitation, NBPD - National Board of Persons with Disabilities, NOOE - National Department of Education. (Adapted from the National Department of Education Special Education Office, 2009).

Education of students with vision impairment

In 2006 in conjunction with UNESCO, UNICEF, and the World Blind Union (WBU), the International Council for Education of People with Visual Impairment (ICEVI) launched its global campaign on education for all children with visual impairment in, identifying Fiji as a focus country for the South Pacific, and PNG as the next one in line. The success of this campaign will be measured by: 'l. increased enrolment rates, 2. reduced dropout rates, 3. improved access to support services, and 4. educational achievement for children with visual impairment, on par with non-disabled children' (ICEVI, 2006). This action by ICEVI places PNG in the international spotlight regarding educational services for children with vision impairment. It is therefore timely for this review the literature to find out what current information is available on the education of students with vision impairment in PNG, particularly regarding student numbers and the types of educational service available.

As we were not able to locate any accurate figures regarding the incidence or prevalence of VI in PNG in children, we devised a strategy to help us estimate the numbers. This entailed working with two definitions of VI: a legal medical definition and an educational definition and being guided by international experts in the field. Vision impairment can be defined in a variety of ways according to context. A legal medical definition focuses on visual acuity and is used for administrative decisions (such as the award of a pension or to determine whether a person can obtain a driver's licence) and for preparing budgets. According to Keeffe, Konyama and Taylor (2002, p. 605):

The World Health Organisation (WHO) has encouraged the use of standard visual acuity criteria to be used in surveys to estimate the prevalence and incidence of vision impairment. The level of categorisation as low vision is visual acuity <6/18 and blindness <3/60. This is a simple definition and on it is predicated most of the information about the likely numbers of children with VI in PNG. A second type of definition focuses on available vision for learning. Pagliano (2005, p. 322) for example argues from an educational perspective that VI: exists on a continuum of severity from mild (common) to profound (rare). In education, definitions focus on how …[vision] impairment affects student learning. The term 'impairment' indicates that the student's difficulty with learning is sufficiently significant to require support additional to that usually provided by the class teacher. The definition then describes the term educationally blind as there being 'a total lack of functional vision for learning' (e.g., student must use an alternative form of literacy to print), and low vision as 'after correction some functional vision is available' (e.g., student has sufficient vision to read print).

Both the medical and the educational definition have been taken into account because, while the standard visual acuity criteria provides an estimation of the

incidence and prevalence of VI, the educational definition is more appropriate when reporting on the provision of educational services. The educational definition highlights the impact vision loss has on learning and emphasises the need for the provision of specialist human and material support and the specialist training of teachers and support staff, a point that can be sometimes overlooked when only using the legal medical definition. Another important educational consideration is the idea of there being a vision impairment continuum, which can be valuable when trying to better understand the available data on student numbers.

Modern medical treatment, corrective surgery, prosthetic devices such as glasses, contact lenses, low vision aids and vision training may make it possible for an individual to visually function at a higher, more efficient and effective level than their uncorrected visual acuity. This means that in countries like Australia, after correction, the prevalence of VI in children is decreasing (Charters, 2005; Taylor, Keeffe, Hien, Wang, Rachtchina, Pezzullo, & Mitchell, 2005), while in PNG numbers are either increasing or remaining the same (Keeffe, Konyama, & Taylor, 2002).

In Australia most vision problems are easily corrected, with only 7 per 10,000 children (0.07%) having such a severe vision problem that educational accommodations and adjustments are required. Of these a much smaller percentage are identified as being blind, perhaps 15 per 100,000 (0.015%) (Kelley, Gale, & Blatch, 1998; Gilbert, & Awan, 2003). These figures comprise children with ophthalmic VI and additional disabilities including cortical VI.

The situation in developing countries like PNG is very different. Gilbert, Anderton, Dandona and Foster (1999) argue there may be a 'ten-fold' (p. 73) increase on the Australian figures but given the available literature this figure is impossible to verify. Nevertheless, for PNG a ten-fold estimate is thought warranted given the significant health, nutrition and poverty concerns coupled with a serious lack of availability of medical care and support services. In PNG few children have access to basic health care, have their vision checked by an optometrist or ophthalmologist or have glasses prescribed. Children with vision problems in PNG are therefore less likely to be functioning at a higher level than their uncorrected visual acuity.

Give the above rationale a very rough estimate for PNG would therefore be about 7 children in 1,000 (0.7%) having low vision, and 15 in 10,000 (0.15%) being blind (Gilbert, & Awan, 2003; Ajaiyeoba, Isawumi, Adeoye, & Oluleye, 2007; Farmer, 2000; Keeffe, Konyama & Taylor, 2002; Dethlefs, 1982; Resnikoff, Pascolini, Etya'ale, Kocur, & Pararajasegaram, 2004). According to 2006 Department of Education figures about 160,000 children were eligible to attend an elementary school year (Department of Education, 2006) and with the above prevalence figures about 1,120 would have low vision with about 240 would be educationally blind. According to Gilbert (2003), in poor countries, at least 50% of VI in children is avoidable if only

simple improvements are made in basic nutrition, water quality and intervention facilities in health and education.

Prior to 1993 a small number of students with VI attended segregated non-government specialist facilities for their primary and secondary education (Adams, 1986). To attend school and receive an education, students had to leave their community, their language and culture. This often resulted in ongoing displacement even after they left school. After the implementation of the National Department of Education policy in 1993, the number of students with VI attending elementary (Elementary 1 and 2) and primary school (grades 3 to 8) has risen but numbers are still much lower than they should be. Department of Education (2009) statistics (see Table 2) report that 366 school students with VI received services. If these figures are accurate, it means many students with vision impairment are missing out this service (1,120 x 13 years of schooling = 14,560; 240 x 13 = 3,120). So, what is happening to children and adolescents with VI in PNG and why are the two sets of figures so different?

Table 2. Students with VI attending schools in PNG in 2009

Program	Age	Male	Female	Total
Centre based	0 - 5	25	23	48
Elementary	6 - 8	23	33	56
Primary	9 -14	78	62	140
Secondary	15 -18	75	47	122
Total	0-18	201	165	366

(Taken from the National Department of Education Special Education Office, 2009)

We speculate that one reason for the discrepancy in the figures is most students who receive support are blind (e.g., non-print - Braille users), with students with low vision not being officially recognised. Some may attend school, but special provisions are not made for them. Yet low vision can have a substantial impact on development and learning if appropriate support in not provided. This is because lack of vision inhibits opportunities for incidental learning. It is therefore vital that the child is explicitly taught many behaviours children with regular vision learn through everyday interaction.

Students with low vision experience significant problems with learning because of the limited amount of vision they have available for them to see both near and distant objects, the reduced extent of their visual field, their inability to be able to read regular print, difficulty with seeing colour, their ability to see in different lighting conditions and their ability to be able to use vision for particular purposes (Thies, Keeffe, & Clarke, 1998). Because of this, students with low vision experience

tiredness brought on by having to concentrate so hard to do a visual task. They also miss key information that is outside their range of vision. This reduces the amount of incidental learning. Without appropriate support these students are likely to fail, particularly the National examinations that permit entry into Grades 9 and 11.

Getting the child with VI to go to school in the first place and to stay there once enrolled appears to be a considerable problem. Parents may keep their child hidden away because they are afraid their child with VI may be taken away from them and sent to a school in a far-off place or they may keep them at home because they do think their child can learn. Children in isolated rural areas must walk long distances to reach school but this is difficult for children with VI. Furthermore, on arrival at school a teacher without specialist training may not make appropriate accommodations for the child.

Additional barriers that prevent students with VI attending secondary level studies include the fact schools are only located in major centres, so students have even greater distances to travel, and parents face even greater expenses associated with accommodating their child near the school (McKinnon, Carillet, & Starenes, 2008; Human Development Indices 2008; & Australian Government AusAID, 2010). Another problem is the need to pass the National examination to go into Year 9 and Year 11, and lack of adequate resource provision, both financial and human (in the form of specialist qualifications and know how), and materials (in the form of specialist teaching and reading materials).

Discussion

In PNG the ideology and principles associated with education of students with disabilities, particularly those with VI is a relatively new phenomenon. Many teachers and school administrators are now tasked with the requirement of accepting and educating students with VI in mainstream classes. This is an enormously challenging job. All children, both regular and those with disabilities are now being encouraged to participate in education to enable them to reach their full potential. This is as a result of the PNG Government endorsement of 1993 special education plan, policies and guidelines. Even though this is a positive development, based on our reading of the very limited literature available we suggest that the recorded number of students with VI attending schools is very tiny (about 2.5% of eligible children with low vision and 12% of those who are blind).

Numerous factors have contributed to this situation. Many relate to the unique characteristics and background of PNG as a developing nation. In particular we are concerned about the attitudes of PNG citizens that do not understand or recognise that children with VI are able to be educated (Primary and Secondary Teacher Education Project, 2002) nor do they understand that students with low vision, as well as those who are functionally blind need specialist assistance in order to be able to reach their full potential. In addition to this there are the logistical problems of

getting to school, especially for families that live in isolated rural areas where schools are a long way away from their homes. A further problem relates to teachers and school personnel not having sufficient training or the resources to adequately cater to the educational needs of these students once they do arrive at school. On top of these predicaments there are the internal barriers that require the student with VI to pass national examinations, often highly visual in nature, in order to be able to transition to lower secondary school and upper secondary school.

PNG will continue to face many educational predicaments, which are exacerbated by the large percentage of the population who live in rural areas where educational opportunities are limited or even non-existent. However, if the goal of equal education for all is to be achieved in the foreseeable future in PNG, substantial changes must be made. These need to occur in consultation and cooperation with the National Department of Education, schools, parents and families and the larger PNG community.

Conclusion and recommendations

This tentative review of the literature has identified three key areas that we believe require urgent attention. They are:

1. The need for comprehensive research to clarify the numbers of children and adolescents with VI in PNG and to determine what is happening to them. This information will help to drive policy, stimulate action plans and monitor future progress. Particular questions that require answers are: How many children in PNG have VI (those with low vision and those who are functionally blind)? How many children have received ophthalmological and optometric attention (been prescribed glasses and other low vision devices)? What happens to children with VI who do not go to school?

2. When conducting this research, we strongly recommend that researchers use both the WHO definition of vision impairment and the educational definition. This will help to highlight the impact vision loss has on learning and to emphasise the need for the provision of specialist human and material support, and the need for specialist training of teachers and support staff.

3. Conduct an ongoing nationwide information campaign using radio, internet and local support services in health and education, aimed at increasing community expectations regarding the education of students with VI and the more active participation of adults with VI in society.

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Editor's Choice - Changing the paradigm: A VET perspective - Jodie Hoger

Teacher Consultant (Vision) Equity Services TAFE Illawarra, NSW

Abstract

How can we improve the development of digital learning materials to embrace 'universal design' ensuring access for all students who have a print disability? This paper is written from a vocational education and training (VET) perspective.

Introduction

I have been a Teacher Consultant supporting students who are blind or vision impaired studying at the TAFE NSW Illawarra Institute now for 15 years. During this time, I have seen a dramatic change in the way students want to study and in how we provide reasonable adjustment enabling them to have an inclusive learning experience and positive outcomes. My Institute covers a large geographical area from Wollongong and the Illawarra, down the South Coast to the Victorian border and from Moss Vale right down the Southern Highlands to Cooma. There are 14 campuses together with another 5 shared learning centres that are co-occupied by the University of Wollongong. Many of these campuses are rural and quite isolated. I am located in Nowra which for those of you who are unfamiliar with the South Coast, is about a two-hour drive south of Sydney. My position is an Institute position which means that I support students who are blind or vision impaired enrolled across the entire Institute, so I travel a great deal from campus to campus interviewing students and setting up educational support programs together with providing support to teaching sections on strategies to assist in the inclusion of these students in the classroom.

Current Practice

Our practice has always been one of providing tailored support to individual students. The process generally looks like this:

- Student identifies with a print disability and requests support
- Student meets with the Teacher Consultant (vision) and discusses the nature of their vision and how it impacts on their learning.
- Strategies are developed between the Teacher Consultant and the student to accommodate their vision issues
- Teacher Consultant communicates these strategies to the Head Teacher of the section and teachers involved with the student's learning program
- Teacher Consultant provides support to teachers including teaching strategies, accessible format support, advice on suitable exam conditions overviews on adaptive technology and devices students may use in the classroom etc.

- Teacher Consultant and student communicate regularly to ensure that everything is going to plan and to assess whether any changes need to be made in the accommodations that have been put in place

For the most part, this process has worked very well for the past 15 years. As learning materials have moved to electronic formats and multimedia productions, so too has the way we work with students and teachers in ensuring reasonable access to these materials. As technology has changed, so too have we changed the way we provide support to students in embracing these changes and broadening our knowledge and acquisition of these devices. Of course, as with everything, we are restricted only by budget and time however one must ask 'so why change something that seems to be working?' and the answer is 'because we could still do it better!'

Universal design

I, as well as many others have a vision of post-secondary education for the future. As a service provider to students who are blind and vision impaired and as a current student myself, I do not see that 'blindness' or 'vision impairment' or 'print disability' for that matter are the issues in accessing educational materials... it is the way that material is presented to students such as myself and certainly to the students I work with that can be disabling. As much as educators like myself and course teachers work hard in modifying learning materials to be reformatted into an accessible document for a specific student, an ideal situation would be that the original document was presented in a way that considered all individual differences that a teacher can encounter in the classroom with print disability being just one potential factor together with cultural background, gender, height, learning style etc. This issue is at the heart of universal design.

So, how do I encourage the principles of universal design at my Institute? I believe that it is critically important to have a multi-faceted approach in order to 'spread the net' so to speak, as wide as possible. By approaching universal design in a number of ways across the Institute, my Institute will adopt these principles willingly knowing that at the end of the day, we will be providing an equitable learning platform that ultimately will create successful pathways from education and training to employment for even more students.

Phase 1

For some time now, I have been trying to grab enough time to develop a short training package for teachers on making their learning materials and classrooms more accessible for students who are blind and vision impaired. As I mentioned earlier, I work one to one with class teachers but have not taken this to a group level. The main reason for this is that again, our model has been very much to work with individual students tailoring a course program to meet their specific needs. Whilst this practice is critical, what if we can educate the teaching sections on taking on UD principles? What if all learning materials are designed in a way that could be easily

translated to Braille, converted to daisy, accessed with an iPad using voice over? What if multimedia learning tools were produced for ease of access using a screen reader? What if all DVDs being used in the classroom had audio description? Now we're talking! I believe that if I can provide the teachers with the information and the tools, we can make this vision a reality.

There have been three driving forces in taking this idea from simmering on the back burner to turning up the heat and making the time to take action. The first is the very pleasing observation that some teaching sections have actually started asking for training to be offered to all their teachers, not just the ones who have students who are blind or vision impaired in their classes, the second, of course, is my passion for access to information and finally, I have to write a training package on vision impairment in an educational setting for my masters! What a perfect opportunity to tackle an assessment and a need for real training in my Institute all at once. So, I am shortly to launch 'Universal design in the classroom: It's not difficult, just different' starting in July.

This process will start off with a 30-minute speed date with UD in the classroom. The design of the program is short and snappy to invigorate and re-energise teachers. It will remind them that they already know a lot about UD if they think back to their training on learning styles and multiple intelligence - I am just taking things one step further.

The program will provide teachers with an overview of UD principles and ways we can adopt these practices in the VET sector. It will then focus specifically on simple strategies that can be used to ensure that information that is provided to our students is as easy to access as possible - for all students. There will be some basic guidelines and examples and most importantly, by using the actual training as a model to educate teachers on how easy it is to adopt these practices in our everyday teaching. The program will also point to further resources for teachers to access and will lead to the development of a longer, more detailed training program that will give teachers the opportunity to actually work on remodelling some of their learning resources so that they reflect UD principles.

Phase 2

As we start educating the educators on UD and how it is not difficult, just different in changing the way that lessons are delivered, we will start working on the rest of the Institute community. Our external website has had an overhaul and works very well with screen readers, however, could still be improved if UD principles are adopted to ensure that information provided from our website is accessible to everyone. This will not be a difficult task as the team that develops and maintains our website are already enthusiastic about making it as accessible as possible. Next, we need to look at internal systems for staff and again, already we have enthusiasm and willingness to create accessible pathways to information developed by the Illawarra

Institute for staff with disabilities so taking it one step further and adopting UD principles will not be a difficult thing to do. By bringing the Institute together embracing universal design will create a learning environment that will ensure the ease of access to information for students who are blind and vision impaired and have other print disabilities.

The information hub will be a project in itself. We are in the process of choosing the most effective environment for this depository of information and strategies on universal design. As with everything else, how we house this information is just as important as the information itself. We are currently looking at wikis, moodles, and SharePoint as possible options remembering that there are always little hiccups such as branding that need to be negotiated. Ultimately this information hub will be a place for teachers, administrators, clerical staff, property managers and support staff to go to where they will find guidelines, strategies, and online learning materials on universal design and how we can adopt these principles across the Institute. There will also be a discussion board where we can help one another with suggestions, what works, what doesn't and where to go to for further information. My dream is for our Institute to be the first to openly adopt universal design as an overarching principle in its operations and service delivery. For my Institute to be seen as the benchmark of excellence for all VET providers in this country and I believe that we can do this.

With such a large project, I believe that the most important place to start is the delivery of information in a way that is more accessible to students who are blind or vision impaired or who have print disabilities. I know what it is like to experience delays, point blank inaccessible information, information provided in a format that is not my preferred format and lack of technology that can make accessing information an enjoyable, independent process and I suppose that is a driving force in encouraging universal design in the first place.

So, how do we change the paradigm?

- By getting the information out there.
- By supporting teachers to realise that making changes to the way that learning materials are distributed is not difficult, just different
- By ensuring that all of the information that our Institute develops adopts UD principles
- By assessing the impact on student retention rates
- By assessing student satisfaction and
- By supporting one another in not only the mechanics of UD but most importantly, in adopting these principles as a way of thinking - that UD becomes a fundamental dynamic of the Illawarra Institute. We have already started, we have a long way to go but where there is enthusiasm, support and

information, we will see this shift become a reality. And that will be the essence of another paper perhaps at a future Round Table conference.

This paper was presented at the 2011 Round Table on Print Disability Conference in Melbourne.

Reports

ICEVI Pacific - Frances Gentle

Lecturer in Vision Impairment, the RIDBC Renwick Centre

Pacific Chairperson, International Council for Education of People with Visual Impairment (ICEVI);

The International Council for Education of People with Visual Impairment (ICEVI) is a professional association of educators, parents, and other professionals working in the field of vision impairment founded in Europe in 1952. ICEVI is organised into seven regions worldwide, each with a chair and committee. ICEVI promotes education for all children with vision impairment through consulting and advocacy, quality teaching practice, and professional training. In a recent press statement, ICEVI highlighted that there are approximately six million children with blindness and low vision worldwide. Approximately 4.8 million (80%) live in developing countries, and 4.4 million (90%) receive no education at all (ICEVI, 2011, p. 1). This report presents an update on ICEVI's activities at the international and Pacific regional levels during 2010- 2011. It commences with an overview of the newly elected ICEVI Principal Officers for the 2011-2014 quadrennium and concludes with an update on changes to the ICEVI World Conference.

Election of ICEVI Principal Officers for 2011-2014

The ICEVI General Assembly was held at the Royal National Institute of Blind People (RNIB) in London in December 2010. Elections of the Principal Officers for the 2011-2014 quadrennium took place during the Assembly, and Lord Colin Low of Dalston was unanimously elected to the position of ICEVI President. His appointment follows Larry Campbell's determination to step down as president after ten years in the role. Colin brings to the position a wealth of knowledge and experience in the fields of disability, vision impairment, and education. Colin has had an interesting and varied career, which has included 16 years at Leeds University teaching law and criminology (1968-84). Colin is currently a Vice-President of RNIB, following nine years as the RNIB Chair of RNIB (2000-2009), and has been President of the European Blind Union since 2003. Colin was appointed to the UK House of Lords in May 2006 for his work as Chairman of RNIB and long-time campaigner for disability rights.

In addition to Colin Low's appointment at ICEVI President, the following people were elected as Principal Officers: Larry Campbell, Immediate Past President; Prof. Jill Keeffe, First Vice President; Hans Welling, Second Vice President; and Nandini Rawal, Treasurer. Profiles for each of the ICEVI Principal Officers have been published in the January 2011 edition of The Educator, which is available on the ICEVI website at http://www.icevi.org/.

ICEVI Pacific Committee

The ICEVI Pacific Committee held its Annual General Meeting in June 2011, and the following people have accepted nomination to the Pacific Committee for 2011- 2014 quadrennium: Frances Gentle (Chairperson), Prof. Jill Keeffe (Vice Chairperson), David Rice (Public Officer), Tricia d' Apice (Secretary), Dr Kevin Murfitt, Paul Pagliano, Setareki Macanawai, Barbara Farouk, Mereoni Daveta, Arnold Koima, Maria Stevens, and Roslyn Sackley.

The Committee farewelled Sandie Mackevicius, Karen Stobbs, Mareselina Tabalailai, and Rukmani Joseph at the end of the 2006-2010 quadrennium. It was a pleasure working with each of these people, and we thank them for their contributions to the work of the Committee in advancing the ICEVI and WBU EFA-VI global campaign in the Pacific region.

EFA-VI global campaign

In 2010, ICEVI and World Blind Union (WBU) jointly launched the 'Education for All Visually Impaired Children' (EFA-VI) global campaign. The campaign's major goal is 'to ensure that all girls and boys with blindness and low vision enjoy the right to education' (ICEVI, 2011a). The campaign is endorsed by UNESCO and UNICEF and is aligned with the Convention on the Rights of Persons with Disabilities (United Nations, 2006) and the Education for All by 2015 goals of the Dakar Framework for Action (UNESCO, 2001). The EFA- VI campaign addresses three of the Millennium Development Goals, namely universal primary education, gender equality, and global partnerships for development (ICEVI, 2010). ICEVI and WBU have established four measures of success for the EFA-VI campaign. These are increased enrolment rates, reduced dropout rates, improved access to support services for children with vision impairments, and their educational achievement on par with non-disabled peers. Progress to date has included implementation of the EFA-VI global campaign in 12 focus countries across ICEVI's seven global regions, including China, Ecuador, Ethiopia, Vietnam, Pakistan, Nepal and Fiji.

ICEVI, WBU, and IABP have recently developed a Joint Strategy to ensure that national governments make specific provision in national EFA plans for children with vision impairment. ICEVI is also seeking to use its influence with the World Bank to ensure that provision of textbooks in accessible format is made a condition of the World Bank's investment in EFA programs (ICEVI, 2011, p.1).

EFA-VI global campaign in the Pacific

Fiji was selected as the first Pacific Island country for implementation of the EFA-VI global campaign. In October 2008, an EFA-VI Forum was held in Suva, Fiji and a National EFA-VI Task Force of key stakeholders was established. The Task Force developed the Fiji EFA-VI National Plan for 2009- 2011, and the EFA-VI priorities addressed during 2010-2011 have related to the establishment of a braille production

unit, and training in early childhood care and education for children with vision impairment, including children with additional/multiple disabilities (ECCE-VI). The ICEVI Pacific Committee wishes to acknowledge the contributions of members of the Fiji National EFA-VI Task Force and regional and international organisations in ensuring the success of the Fiji EFA-VI campaign since 2008.

Progress during 2010-2011 has included the establishment of a braille production centre at the Fiji Society for the Blind, which was officially opened by the Fiji Minister of Education in June 2010. The future success of the production unit has been underpinned by training support in the areas of braille transcription and technology maintenance provided by the State Braille and Large Print Service of the NSW Department of Education, Quantum Technology NSW, and the Royal Institute for Deaf and Blind Children (RIDBC).

During 2010-2011, train-the-trainer programs in ECCE- VI were held in Australia and Fiji. In June 2010, a two-week leadership program in ECCE-VI was hosted by RIDBC in Sydney, followed by a one-week train-the-trainer program in Fiji in July 2010. The Fiji program was hosted by. Fiji Society for the Blind in Suva and 35 education, health, and rehabilitation professionals attended. Planning is currently underway for an advanced one-week ECCE-VI training program to be held at the Fiji Society for the Blind in September 2011. An evaluation of the ECCE-VI program for 2010-2011 will be conducted by RIDBC in Fiji in November 2011.

Pacific EFA-VI Forum

In January 2011, the Royal Institute for Deaf and Blind Children (RIDBC) and Vision Australia (VA) hosted the Pacific EFA-VI Forum, which was held at the RIDBC Renwick Centre in Sydney. The major aims of the Forum were the strengthening of regional collaboration among education and disability organisations supporting children with disabilities and their families, and information sharing about the EFA-VI campaign in the Pacific region.

A total of 40 people attended the Forum, including of 24 people from the Pacific Island countries of Federated States of Micronesia, Fiji Islands, Kiribati, Nauru, New Zealand, Palau Islands, Papua New Guinea, Solomon Islands, Samoa, Tonga, and Vanuatu. The Pacific Island participants included 14 representatives of government ministries/ departments of education and health, and eight representatives of national organisations of people with disabilities (DPOs). Other participants included representatives of the Pacific Islands Forum Secretariat, Pacific Disability Forum, Australian Government AusAID, RIDBC, Vision Australia, SPEVI, Centre for Eye Research Australia (CERA), and James Cook University School of Education.

The most significant outcome of the Pacific EFA-VI Forum was the development of the Pacific Education Development Framework - Vision Impairment, 2011-2015 (PEDF-VI), which sets out the priorities in education of children with vision impairments in the ten Pacific Island countries that attended the Forum. The PEDF-

VI is aligned with the Pacific Education Development Framework 2009-2015 (Pacific Islands Forum Secretariat, 2009a), and integrates the education implications of the Pacific Regional Strategy on Disability 2010-2015 (Pacific Islands Forum Secretariat, 2009b), and the Convention on the Rights of Persons with Disabilities (United Nations, 2006).

The PEDF-VI was formally launched at the Pacific Disability Forum 'Regional Conference on Disability', which was held in Auckland in April 2011. The PEDF-VI is available on the Pacific page of the ICEVI website, http://www.icevi.org/pacific.html.

ICEVI World Conference to be replaced by General Assembly

The ICEVI Principal Officers have announced that the 13th ICEVI World Conference will be replaced by an expanded General Assembly which will take place in Thailand from 15-18 November 2012 and will be hosted by the Thai Blind Union. The ICEVI General Assembly will be held jointly with the WBU General Assembly, which will take place from 10- 16 November 2012. The ICEVI Principal Officers emphasise that the joint event will provide opportunities for the ICEVI and WBU members to attend joint technical sessions on topics which are of mutual interest for both organisations. Information about the ICEVI General Assembly in 2012 will distributed via the ICEVI website, www.icevi.org, the ICEVI E-News, and ICEVI's journal, The Educator.

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New SPEVI website: Support for the future - Phia Damsma

Sonokids Australia, SPEVI web administrator

The SPEVI website has undergone considerable change to better support SPEVI's professional and active image.

Technical changes

After having been expertly hosted and managed over the past several years by Sandra Vasallo of e-bility, the time had come to move the website to a new, dedicated domain name at www.spevi.net. I maintain the website, which is now hosted by RBTS, an IT company operated by young men who years ago, as children, were engaged in Sonokids. Programs. The website is powered by Sonokids' content management system 'MaX', ensuring accessibility and usability for people who are blind or have low vision.

New design

Chrissie Butler (BLENNZ) and I brainstormed together about what we believed would best reflect the goals and aspirations of South Pacific Educators in Vision Impairment.

Keywords that came to mind were: islands, bridging isolation, connecting, communication, sharing, natural environment, and of course vision impairment. This gave me the inspiration for the creative design of the new website: visualising 'SPEVI' in braille, with the dots made to look like islands against a blue ocean. The resulting fresh design symbolises the SPEVI members, on islands big and small, in the South Pacific Region, joined together in SPEVI by common visions and goals.

Join SPEVI

The new website at www.spevi.net offers a growing number of resources and useful links, is home to the new Blog and the new SPEVI mailing list, which is abuzz with news. SPEVI's active membership is what makes it thrive. These new media aim to sustain and grow this membership. Through the website, we appeal to all who are involved with the education and support of children and young people who are blind or have low vision within the South Pacific region, to become a member of this active and important organisation.

Statewide Vision Resource Centre - Department of Education and Early Childhood Development, Victoria - 2011 in Review - Deb Lewis

Manager

The Statewide Vision Resource Centre (SVRC) at Nunawading offers support to all students with vision impairments - blind and low vision - in Victorian state, Catholic and independent schools. Assessment of all students via the multi-disciplinary Educational Vision Assessment Clinic ensures that services are targeted to the 550 eligible students who are in significant educational need due to their vision impairment.

The SVRC offers a widely acclaimed professional development program with over 50 seminars and hands-on workshops annually. The Expo of Access Technology, held in late November each year, focuses on the needs of students with vision impairment is well-attended by members of the vision impairment and wider community.

High quality materials in alternative format (braille, etext, audio, DAISY and/ or large print) are available for all Victorian students.

Dot Power offers Victorian students who are blind from pre-school to Year 3 a term-ly opportunity for intensive instruction in braille reading and writing, including tactual graphicacy. Perhaps the focus is a naughty postman who delivers beetles and frogs, or the braille music code, but the students (and parents) clamber for more! One student recently wished 'Dot Power School' could be held on a Saturday so that his brother could come too! The opportunity for young students to meet other students who read and write braille is invaluable.

The Support Skills program is available to Victorian students with vision impairment from years 4 to 10. Held at the SVRC on Fridays, four groups of students are offered eight days per year of individualised instruction. In conjunction with the specialist program offered by the visiting (itinerant) teacher, the SVRC Support Skills Program focuses on intensive teaching of the Expanded Core Curriculum for students with vision impairment. Students receive individual or small group educational sessions in access technology, braille, social skills, independent living skills, career education, orientation and mobility, art, physical education, music etc from qualified and experienced vision specialists. This year, the older students will also attend a Careers Day with eminent speakers including Graeme Innes AM.

Ozzie Dots, a program developed over the past four years to support the teaching of contracted braille to beginning braille readers, is now available for purchase. For more information about the SVRC, Ozzie Dots and about education of students with vision impairments, visit: www.svrc.vic.edu.au

Narbethong School, Queensland

Narbethong School in Brisbane, Queensland, will be celebrating its 50th anniversary in 2013. Over the next two years, information about the history of the school will be gathered from many different sources.

Past and present staff members of Narbethong are invited to participate by contributing memories of their involvement with the school.

Your contribution should contain significant memories. You are asked to limit your contribution to 500 words. Contributions should be e-mailed to narbethongis50reflections@yahoo.com.au

All contributions will be collated and form a part of an archive that is to be established at the school and some information provided may be used in a future publication.

Full details about suggested subjects to write about and how to submit your contribution can be found in the information document provided by Heather Grainger, which is published on the SPEVI website. Visit http://www.spevi.net and select the webpage 'Links' in the menu. Via the link 'Narbethong' in the Link List on this page you can access the Word document.

Ozzie Dots: Teaching Contracted Braille and Tactual Graphicacy - Now Available! - Deb Lewis

Manager, Statewide Vision Resource Centre
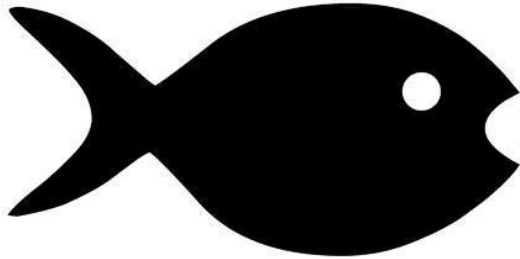
For the student who is blind, braille is the primary literacy medium. It is generally accepted that at some point and in order to be able to manage the volume of work at school, the successful student will need to be a competent reader and writer of contracted braille and have sophisticated skills in the ability to interpret tactual graphics.

The aims of Ozzie Dots are to:

1. introduce contractions and basic punctuation
2. introduce tactile graphics and develop the skill of tactual graphicacy
3. provide opportunities for concept development
4. provide exposure to non-text based sources of information
5. encourage reading through engaging stories
6. offer early success through predictability, repetition and simplicity
7. provide braille books as complete, self-contained files
8. make available the opportunity to take books home Ozzie Dots is a structured set of books designed to assist

Ozzie Dots is a structured set of books designed to assist in the teaching of contracted braille (Unified English Braille). The Ozzie Dots books are not intended as a reading scheme, but as an adjunct to the class reading program.

Ozzie Dots introduces contracted braille in a sequential manner to students who are familiar with the braille alphabet. It is intended as a resource to be used by specialist teachers (e.g. visiting/itinerant teachers), teachers, teacher aides and parents/carers to provide a systematic introduction of contracted braille to students in their first years of school.

The Ozzie Dots books are illustrated with tactual pictures offering students the opportunity to develop the skills of tactual graphicacy. Tactual graphicacy is the ability to use the sense of touch to interpret and understand two-dimensional representations such as illustrations, symbols, and diagrams.

Further, the topics of the stories and the format of the text and illustrations offer opportunities for concept development.

The language and stories have been designed for young readers. In some circumstances Ozzie Dots may be considered a useful resource for older children or when intensive, structured introduction of braille contractions is indicated. The Ozzie Dots stories are fun and light-hearted and are intended to maintain students' interest.

Ozzie Dots has visited each Australian state and several Pacific nations including New Zealand and Samoa. Braille teachers have very kindly provided us with much-needed feedback including:

- I am loving OZD! It is fantastic!
- For teachers, this resource is invaluable because it is ready to use – saves teacher time, and because it is systematic in its introduction of contractions.

We even know that some students' homework is 'to look at the pictures every night with the lights out and the books on their tummies!'.

Ozzie Dots has been produced at the Statewide Vision Resource Centre by a project team comprising Lee Clarke, Deb Lewis and Leanne Nagel with expertise and guidance from Gillian Gale.

Ozzie Dots Set 1, comprising 15 books, is available to download from the SVRC website. Sets 2 to 6 are available for purchase and Sets 7 to 20 will be released during 2011 and 2012. Having the Ozzie Dots books available as a Duxbury file allows users to tailor the braille to the needs of each student. For example, contractions with which a student is familiar can be replaced within the file prior to embossing. The files can easily be adapted to non-UEB braille codes if required.

For further information about Ozzie Dots including purchasing information, please see: www.svrc.vic.edu.au.

Reference

Gale, G. & Lewis, D. (2009). Ozzie Dots: From uncontracted to contracted braille in the first three years of school: A work in progress. *Journal of South Pacific Educators in Vision Impairment, 4*(1), pp 25-29.

Update on the Australian Childhood Vision Impairment Register - Sue Silveira

Research Fellow - Renwick Centre, Royal Institute for Deaf and Blind Children

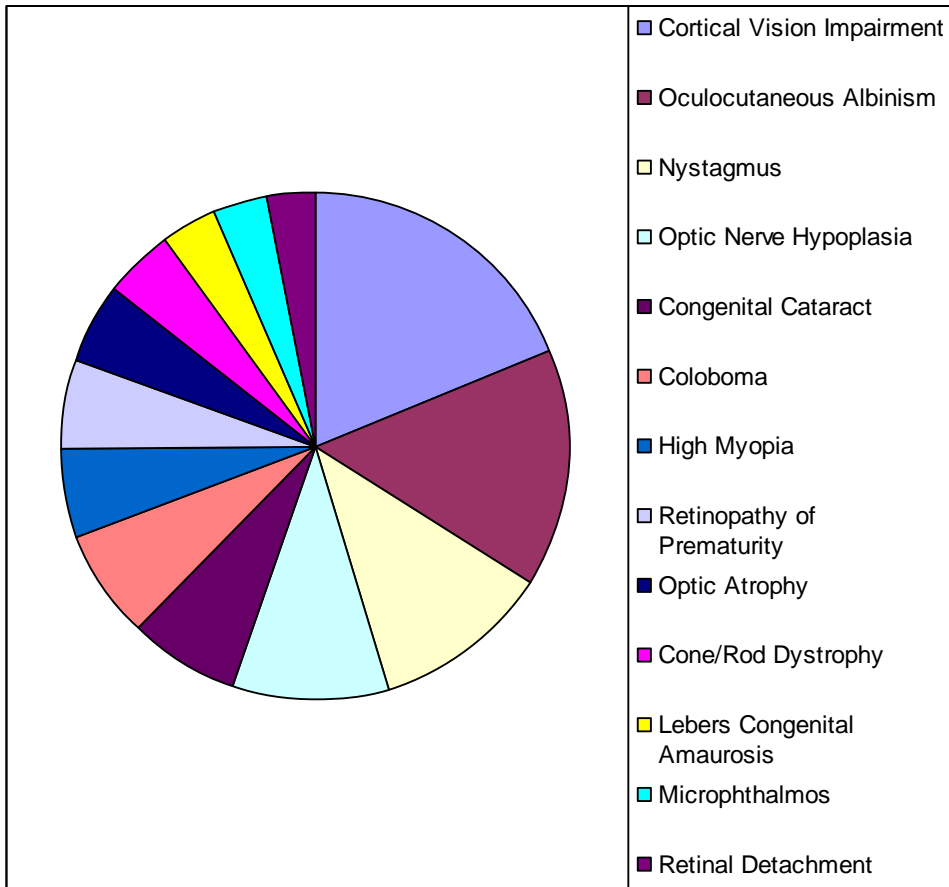**The Australian Childhood Vision Impairment Register (ACVIR)**

I was very pleased to be asked recently to present at the SPEVI Queensland PD day on 11th July 2011. This was a great opportunity to share the latest findings from the Australian Childhood Vision Impairment Register with SPEVI members, many of which are instrumental in informing families about the Register.
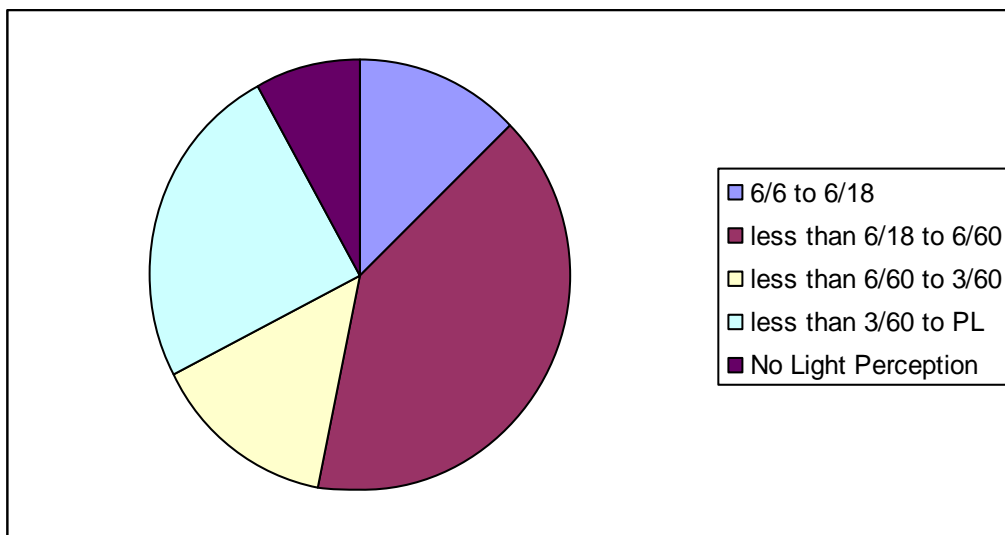
Below is a summary of the findings which were presented:

- There are 450 children now registered and the number grows each day
- The project has approval with all DET departments or their equivalent across Australia
- The project is hosted by the Royal Institute for Deaf and Blind Children, and supported by Vision Australia, Guide Dogs QLD, NSW / ACT, Victoria, Royal Guide Dogs Tasmania, RSB Guide Dogs, and Cando4kids
- The current age ranges for registered children include: 37% aged 0-5 years, 44% aged 6-12 years and 19% aged 13-16 years
- All registered children are currently receiving some type of non-government organization (NGO) support, with 33% reporting NGO involvement by 6 months of age
- 40% of registered children have someone else in their family with a similar eye condition
- 80% of registered children had their VI suspected within the first 6 months of life
- The people most likely to suspect VI in registered children are parents (44%), paediatricians (13%), ophthalmologists (11%), child health nurses (6%), grandparents (4%) & GPs (2%)
- 88% of registered children have their VI diagnosed by 12 months of age
- 63%of registered children have additional disabilities, 17% have severe developmental delay, 20% have epilepsy & 19% have cerebral palsy

The most common diagnoses of registered children appear below. Interestingly these align very closely with research from other countries such as the US and UK, which share similar health and socioeconomic situations to Australia.

- Cortical Vision Impairment
- Oculocutaneous Albinism
- Nystagmus
- Optic Nerve Hypoplasia
- Congenital Cataract
- Coloboma
- High Myopia
- Retinopathy of Prematurity
- Optic Atrophy
- Cone/Rod Dystrophy
- Lebers Congenital Amaurosis
- Microphthalmos
- Retinal Detachment

The visual acuity level of registered children appears below:

- 6/6 to 6/18
- less than 6/18 to 6/60
- less than 6/60 to 3/60
- less than 3/60 to PL
- No Light Perception

Thank you to all SPEVI members who continue to inform families about the Australian Childhood Vision Impairment Register. Your help is vital in supporting recruitment of children with VI, so we can accurately represent this population to

service providers, researchers, and government. A combined effort will mean these children and their families are provided with the services and support they deserve.

Families can join the Australian Childhood Vision Impairment Register by visiting the website: www.vifamilynetwork.org.au or by calling staff on (02) 98720303.

The VI Family Network - Sue Silveira, Teresa Williamson, Cathy Yu

vifamilynetwork.org.au

The VI Family Network is a new website that has recently opened. The concept for the website came about in response to families requesting online registration for the Australian Childhood Vision Impairment Register, and also for online access to Australian low vision resources.

The VI Family Network website is located at: www. vifamilynetwork.org.au. It is hosted by the Royal Institute for Deaf and Blind Children and allows families to join the Register online. Once registered, families can join a secure online parent forum. So far, the forum has been popular with families exchanging their inspiring stories, providing support and great ideas in tackling the day-to-day challenges they face.

The website also gives public access to a large list of resources including:

- Government reports, e.g. Better Start for Children with Disability
- Newsletters from low vision service providers
- The latest news on technology, e.g. apps, free audio books, online games, and resources for kids with VI

Information is provided for each of the support groups with a link through to their website & contact details.

Upcoming VI events held anywhere in Australia also advertised on the website.

Please visit the VI Family Network at www.vifamilynetwork.org.au. We are very happy for feedback and inclusion of any resources you might know of that would interest families. You can email the web designers at: acvir@ridbc.org.au.

Technology

Humanware™

SmartView 360

The video magnifier that allows your low vision students a 360° view of the classroom

Simply point the camera to read ...

With its integrated camera and monitor, the SmartView 360 magnifies images to help your students clearly see the classroom around them. It's easy to position the camera to see across a room, focus on a whiteboard or enlarge any hard copy text.

Easy to use, easy to see ...

Classroom work, studying, and homework are made easier through the power and versatility of the SmartView 360 desktop video magnifier. From the whiteboard to books, students of all ages can quickly and easily move the camera for a clearer view.

For further information contact HumanWare

Ph: 02 9686 2600

Email: au.sales@humanware.com

Tributes

Vale Tom Rogerson

SPEVI Life Member Tom Rogerson was appointed Deputy Principal of the Foundation's Special School in 1962 and became Principal of Homai College for the Blind as the school came to be known, in 1972. Throughout his tenure, Tom played a major role in the development of educational philosophy for a minority group of high needs students and helped transform residential education to a 'mainstream' philosophy. Tom will always be respected in Foundation and education circles as an innovative humanitarian, a man of principled action and commitment.

Homai College was built to accommodate 250 students and in the 1960's reached near capacity. But the philosophy of residential schools was changing, and it was Tom's innovation, flexibility and unswerving belief in the capabilities of young blind students that enabled him to make the transition to an education service that, today, supports students and their families in local neighbourhood schools. In 1966 Tom travelled to the Perkins School for the Blind in Boston to study the assessment and teaching of Deafblind students. These were young folk often misdiagnosed and who often languished in mental institutions. Rubella was abroad and the combination of hearing and sight loss were not uncommon. The assessment and teaching of communication methods introduced to Homai College by Tom liberated many a young soul to an independent life.

In similar vein, Tom introduced an 'Independent Living Skills' program that gave boys and girls opportunities in pulling machinery to bits and putting it back together again, safe use of tools, cooking, sewing and a wide variety of other dexterity oriented and craft-based tasks. Tom had a capacity to draw about him staff who supported his educational philosophy of broadening developmental experiences and in transforming an 'institution' into a home away from home where individual needs, talents and sensitivities were nurtured. Many blind students rode bikes in the grounds, played team sports and competed in Trans-Tasman competitions in swimming and track and field events. Tom's initiative started Trans-Tasman sporting contacts which continue today. Music has always been a strong tradition in the blind community and Tom introduced to the College, a system of external tutors to teach various instruments and to encourage students to sit external music exams. Piano playing, a brass band and choir, were very much part of College life.

As well as breaking new ground in education at a time when Special Education was being hotly debated, Tom continued his formal studies towards a double degree in Education and Anthropology, and working with Australian colleagues formed the Australian and New Zealand Association of Teachers of the Visually Handicapped with a view to raising standards of teaching qualification and practice. This Association of which Tom was a life member continues today, albeit under a different name. Further, Tom gave strong practical assistance to teachers of the blind in the

South Pacific, Fiji in particular, and teacher exchanges were seen as part of professional development. The Postgraduate Diploma in Special Education Vision Impairment, Faculty of Education Auckland University owes its existence to Tom and his colleagues during the early 80s. Tom's personal ethos of helping people to help themselves spilled over into the community and resulted in the strengthening of the Residential Care Association, formation of the Deaf-Blind Association of New Zealand, and Blind Sailing New Zealand. This latter venture has led to six international regattas, at most of which Tom has been present, and at which Kiwi teams have done remarkably well, winning Gold, Silver and Bronze, 2006, at New Port Rhode Island.

Tom was a Rotarian since 1972, focusing on the prevention and treatment of hearing loss. He was made a Paul Harris Fellow in 2005, a prestigious award in Rotary Circles. Tom left Homai College in 1985 with a legacy of innovation, transformation to mainstream education and an abiding belief in the potentials and accomplishments of young blind and partially sighted students who, when he began as a young teacher were often sidelined in the traditional school system. Tom Rogerson has played a huge innovative role in creating an educational and humanitarian philosophy that has equipped hundreds of blind and partially sighted students to become productive citizens of this country, working at a time when such approaches to blindness education were not at all well supported. We all have cause to be grateful to the dedication and commitment of teachers such as Tom Rogerson, Gwen Nagel, Lorna Grant and many others, past and present, who have had the insight and skill to engender a love of learning and who have given us the tools to take charge of our own lives.

Sue Spooner and Don McKenzie

Vale Pat Dawson

It is with much sadness that I report the death of our friend and colleague Pat Dawson. Pat died on Wednesday night, July 27, 2011. Pat will be remembered by many of us as a lifelong user of braille. She was a passionate advocate for the role of braille as a key literacy medium for blind people, and she did much to promote it in the community.

Pat served as Secretary of the Australian Braille Authority (ABA) for 10 years, beginning in the mid-1980s. During this time, she maintained an exemplary standard of minute-taking, correspondence, and record-keeping, and was an inexhaustible source of encouragement and support to those of us who were privileged to work with her on the ABA Executive.

After Pat concluded her term as ABA Secretary in 1996, she continued to play an active role in the ABA NSW Subcommittee, including involvement with the Subcommittee's annual Braille Writing competition. She also worked tirelessly to

promote braille in the community and would often take leave from her day job to spend time at the local library during Education Week or
Book Week, where she would talk to school students about the importance of braille and produce braille samples for them to take away.

Pat was firmly embedded in the politics of her community, being a strong supporter of her local ALP branch. She also served on various disability-related bodies such as the Commuter Transport Council, often in an Executive capacity. And I'm sure Pat would want me to proclaim her passionate support for the Canterbury Bulldogs.

Pat began work as an audio typist with the NSW Department of Education in 1965. In 1995 she changed roles to become a braille proofreader and retired in 2006 after 40 years of service to the Department and to the broader community of blind people. Pat Dawson was a loyal friend, an esteemed colleague, and an inspiration to us all. May she be in peace.

Bruce Maguire and Josie Howse

Vale Dr June E. Downing

June died peacefully at home July 20, 2011, after 10 months with cancer. She was born June 23, 1950, in Washington, D.C. Dr. Downing was Professor Emerita of Special Education at CSU -Northridge, where she taught from 1995-2007 and Assoc. Prof. in Special Ed at the U of Arizona from 1987-1995. A student wrote: 'You pushed me to think, to ask why not, to problem solve, to make what used to be impossible, possible'. June published 9 books, 13 monographs and curricula, 14 book chapters, and more than 38 articles. She presented numerous keynotes and workshops on teaching students with multiple disabilities and deaf-blindness throughout the United States and internationally, including: Canada, Australia, Russia, and Abu Dhabi. June was on the Executive Board of TASH, an advocacy org. for those with disabilities and was founding member of CHIME Institute, an inclusive school.

Professor Deborah A Chen.

Life Members

Deb Lewis

Manager, Statewide Vision Resource Centre, a long-time SPEVI member and recognized leader in the field of the education of students with vision impairment. Ms Lewis is a trained secondary teacher who has taught in mainstream school, St Paul's School for the Blind and as a Visiting Teacher for the Vision Impaired with the Victorian Department of Education. For the past 15 years she has been the Manager of the Victorian Statewide Vision Resource Centre (SVRC).

Ms Lewis has pursued her study in vision impairment and holds a:

- Graduate Diploma in Special Education (Vision Impairment) - Burwood State College, Victoria; and
- Masters Degree in Special Education (Sensory Disability) - Renwick College, The University of Newcastle

Ms Lewis' involvement with SPEVI includes:

- Past Councillor
- Close involvement rewriting the SPEVI Constitution
- Co-organiser of the 2005 Melbourne SPEVI Conference
- Co-Organiser of the yearly Victorian SPEVI events
- For six years she provided one of her staff to act as the National SPEVI Treasurer
- Presentation of Papers at SPEVI Conferences

As Manager of the SVRC, Ms Lewis provides outstanding, innovative leadership in a wide variety of roles including:

- a sophisticated working knowledge of the wide range of technology for students with vision impairments
- 20 yearly issues of The Bulletin- an invaluable on-Une resource which has national and international subscribers in the field of vision impairment
- updating and maintaining the SVRC website - another invaluable on-line resource with a wealth of readily available information on a wide variety of topics of interest to teachers of students with vision impairments, parents and other professionals
- overseeing the alternative format production centre
- providing exceptional Professional Development for teachers, parents and other professionals (35 presentations on a wide variety of topics in 2010)
- encouraging and recruiting staff to continue to complete further specialist qualifications.

Sandie Mackevicius

- Early childhood Educator
- 33 years in the field of Vision Impairment, at RVIB, now Vision Australia
- Established Early childhood Visiting Teacher Service at RVIB
- Taught in on site early intervention and preschool groups, initially with children in residential settings
- Visiting Teacher for children aged 5-8 years
- Committed to Family Centred practice and Active Learning principles when children who had a vision impairment were being integrated into local services
- Senior Early Childhood Educator at VA, and worked in multidisciplinary teams at VA
- Co-authored
    - My Child has a Vision Impairment: What can he see?
    - Posting the Pebbles
    - Little Steps to Learning
- Developed Double Dot Early Literacy program for families and children 0-6 years
- Lectured at Melbourne and Deakin Universities in Vision Impairment and its impact on Early Education
- Presented at ICEVI and Low Vision Conferences
- Trained post graduate early intervention educators, and inducted early childhood educators at Vision Australia

SPEVI

(Initially ANZAEVH: Australian and New Zealand Educators of the Visually Handicapped)

- Victorian Councillor 1997-2005
- From 1997, co-organized annual SPEVI Victorian Networking Days, Inter agency Professional Development Days
    - Developed 'Friends of SPEVI' and arranged regular SPEVI network meetings from 1997-2005.
- Conference organizer for 2005 SPEVI conference in Melbourne 'Families and Educators: Facing Challenges'
- With families in Victoria, established Australian Association for Parents of children with Vision Impairment (AAPVI) with support from Susan La Venture (USA) and Paul Manning (NZ)
- President of SPEVI 2005-2009
- With Tricia D' Apice, and other supporters, completed the processes for SPEVI Incorporation in 2007
- Broadened the SPEVI website and electronic membership data base

- Represented SPEVI at EFA VI in Fiji in 2008 in the

Sandie is passionate about SPEVI and its role, and while president supported its expanded role in the Pacific nations and their attendance at 2007 conference. She has encouraged new members, especially among younger educators, and values the support networks that it develops across the South Pacific.

Special Recognition Award

Tim Connell

Managing Director of Quantum Technology Pty Inc., a long-time SPEVI member and generous supporter

Mr Connell is a graduate of the University of New England, and through his business Quantum Technology, which he founded in the late 1980's, the Quantum team which Mr Connell has created, offers exceptional and invaluable support, advice and training to students, parents and teachers throughout the country. Mr Connell has always been a staunch advocate for Braille and for students' accessibility to the written word through Braille and Low Vision Technology. He has developed and promoted the Mountbatten Brailler which is now marketed worldwide and has proved a magnificently innovative benefit to so many Braille-using children particularly to those in the early years of their education.

In recognition of the on-going battle faced by families of children who are blind and vision impaired to provide them with the technology needed for attaining social and educational goals, Quantum Technology through Tim's leadership, has initiated its three well-known scholarships, The Freedom Scientific/Quantum Technology Jaws Scholarship, The Freedom Scientific/Quantum Technology WYNN Scholarship and The Gillian Gale Award for Braille Literacy. Over the years these very generous scholarships have provided thousands of dollars' worth of equipment to the fortunate recipients. Mr Connell gives unstinting financial support to the NSW ABA annual Braille competition; and through its periodic newsletter, Quantum Technology has consistently published articles aimed at drawing political attention to the plight of children who are blind and vision impaired. In addition, he has given lectures to postgraduate students in the RIDBC Renwick Centre program, and on several occasions has subsidised the expenses of visiting lecturers to the program. His efforts to serve and support individuals with a print handicap have widened and now include his dedication to assisting students with dyslexia. He is a member of the Parliamentary Dyslexia Working Party. Mr Connell participated in our 2011 Conference as a keynote speaker. He is a leader in our field having unique special expertise in information and access technology, with an international reputation and standing.

John Berryman

John Berryman has been Chief Executive of the Royal Institute for Deaf and Blind Children (RIDBC) since 1985, having joined RIDBC in 1978 and retiring in 2010. Coming to RIDBC from a background in computing, his initial project was to establish Australia's first computerized braille production facility.

Since 1985, under his leadership as Chief Executive, RIDBC has established a broad range of new services and facilities. These include:

- The Garfield Barwick School, a school for children with impaired hearing, preparing children for integrated schooling
- The Thomas Pattison School, a school for deaf children where communication is through Auslan (Australian Sign Language) and written English
- Student Support Services, providing visiting teacher support and alternative format materials for students with sensory impairments in mainstream independent schools
- Five special preschools, two of them in regional locations
- The Renwick Centre, a centre for professional development and research, conducted in affiliation with the University of Newcastle
- The Jim Patrick Audiology Centre
- RIDBC Teleschool, a program serving rural and remote areas throughout Australia, including Aboriginal communities.

John holds the following qualifications:

- Bachelor of Science (University of Sydney, 1970)
- Grad Dip in Data Processing (NSWIT, 1981)
- Master of Administration (Kuring-gai CAE, 1989)
- Master of Special Education (University of Newcastle, 2000)

His professional memberships are:

- Fellow, Australian Institute of Company Directors
- Fellow, Australian Institute of Management
- Fellow, Australian College of Education

John Berryman was awarded the 2001 Alumni Medal of the University of Newcastle, in recognition of his innovation, outstanding leadership, knowledge and professional practice in the education of deaf children and blind children.

Melissa McCarthy

Melissa McCarthy, from the Royal Institute for Deaf and Blind Children (RIDBC) was awarded joint first prize in the 2011 Telstra-TJA Christopher Newell Prize competition.

The competition was judged on the entrant's ability to demonstrate the tangible benefits that innovative use of broadband or other telecommunications technology can deliver in assisting individuals with disabilities. Melissa's article explained how RIDBC Teleschool uses new developments in technology to provide families in rural and regional areas of Australia with greater access to specialist support for their child's hearing or vision impairment.

'The Royal Institute for Deaf and Blind Children is constantly striving to find innovative ways of supporting children with sensory disability and RIDBC Teleschool is just one example of that innovation,' said Ms McCarthy. 'I'm so honoured to receive this award. It is such an achievement to have Telstra recognise RIDBC's innovative application of technology.'

Rural families, like the Millers from Maude in NSW, are no longer restricted by the barriers of distance or isolation and can use telecommunications technology to access regular, intensive support in their own home. Living in a small town with only 30 residents, 780 km southwest of Sydney, has not prevented the Millers from receiving critical early intervention for their son Kristian who is profoundly deaf. 'RIDBC installed special videoconferencing equipment in the family's home and Kristian and his parents received regular lessons with a specialist RIDBC Teacher/Consultant based in Sydney,' said Ms McCarthy.

'As a result of the family's hard work and with the aid of specialist teaching and cochlear implants, Kristian, now three years old, has age-appropriate language skills. The RIDBC Teleschool sessions will continue so he is prepared for school,' she added.

Kristian's mother, Kathryn, is proud of her son's achievements and says 'RIDBC Teleschool is not just for children; it is for parents and families, who need support as well.' Just because we choose to live in rural Australia does not mean we have to be isolated,' said Kathryn. 'With videoconferencing right here in the comfort of our own home, we can rest knowing that we have all the help we need to ensure Kristian is making progress and is on the right track.'

The Awards ceremony took place on Tuesday, 10 May 2011, in Melbourne in conjunction with the Telstra Disability Forum held on that day.

Resources

Australian Blindness Forum: Recycled Equipment Website

Kevin Murfitt, Chair of the World Blind Union (WBU), Pacific-Oceania Sub-region, reports that the project is progressing well. Donated equipment has already been sent to Papua New Guinea, Fiji, and Timor L'Este. A paper written by Kevin Murfitt and Andrew Daly, CEO of the Royal Society for the Blind, South Australia, on the pilot project was included in the Best Practice Examples program of the WBU General Assembly in August 2008. In the meantime, the ABF urges all blindness organisations in Australia and New Zealand to help make the pilot scheme a success by adding their lists of available equipment to those already on the Equipment Register at http://www.rsb.org.au/wbu/index.html

Vision Australia Dickinson Literary Award

Vision Australia's Dickinson Literary Awards have a long and proud history among people who are blind or have low vision. They were initiated in 1921 by the Queensland Musical, Literary and Self-Aid Society for the Blind (later Royal Blind Foundation Queensland and now Vision Australia) as a literary competition for writers who were blind or had low vision.

Entries had to be on the topic of 'Self Reliance', and the prize money was one guinea. All entries had to be submitted in Braille or typewritten in English.

The Awards later became known as the Dickinson Memorial Awards to acknowledge the contributions of Harold Dickinson (a prolific writer and winner of the competition) and his brother Edwin Dickinson. In 1981, the International Year for Disabled Persons, a monetary grant enabled an Australian blind writers' only section to be introduced. The writing competition which was open to international entrants unfortunately had to be discontinued due to a lack of funds during the 1990s.

In 2001, the awards recommenced on a trial basis with the Royal Blind Foundation Queensland (now Vision Australia) hosting the competition. During this time they were supported in a voluntary capacity by Ross and Robyn Bree, both well-known and respected in the Queensland blindness community.

In 2008, Vision Australia proudly revived this prestigious national literary competition for all Australian writers who are blind or have low vision.

In all their work, they strive to achieve their mission of creating a community partnership of knowledge, skills, and expertise to enrich the participation in life for clients and their families.

It is vital that prestigious awards such as these exist to:

- promote the contributions of people who are blind and have low vision to the larger community

- highlight the creative excellence that exists in the blindness community, and
- to allow people who are blind or have low vision to tell their own stories in their own words.

Vision Australia will ensure that the community recognises the capabilities and contributions of all people who are blind and have low vision.

More information: www.visionaustralia.org/

Phone: 1300 84 74 66.

Blind Citizens Australia: Parent's News

Parent News is a quarterly Blind Citizens Australia newsletter providing up to date information about key issues of interest to parents. Parent News welcomes your input-

Parent News is available in other formats on request - please contact BCA National Office if you require Parent News in large print, text to audio format, data CD or Braille. This email contains copies of Parent News in two columns and a single column format for easier reading with screen reading programs.

jessica.zammit@bca.org.au Ross House, Level 3, 247-251 Flinders Lane, Melbourne Vic 3000 Phone: 1800 033 660 Fax: (03) 9650 3200

Email: bca@bca.org.au

Quantum 2011 Print Disability Scholarship

Quantum are now open for applications to the 2011 Print Disability Scholarship Program and Seniors Grant.

The inability to read affects people from all walks of life, from young children in school to older people at home, having a print disability impacts on the daily lives of individuals in unique and fundamental ways. Accessibility is critically important for people with a print disability and to build awareness of the ways that alternative information needs can be met, Quantum introduces the new print disability scholarship program and senior's grant.

This program will feature a range of new prizes, including electronic magnifiers, text-to-speech devices, and portable DAISY players. Quantum invites applicants to tell us how having a print disability has impacted your life.

Applications close Friday 25th November 2011.

Go to www.quantumrlv.com.au to download an application form.

The International Journal of Orientation & Mobility (IJOM)

IJOM is a new Australian-based serial, sponsored by Guide Dogs NSW / ACT and produced collaboratively with RIDBC Renwick Centre. It is a peer-reviewed journal that explores issues and contributes new knowledge to the field of Orientation & Mobility (O&M) (including Guide Dog Mobility). The IJOM seeks to strengthen dialogue within the O&M field around the world and to facilitate communication among instructors and service providers from a variety of cultural backgrounds.

The IJOM publishes qualitative and quantitative research articles and analyses, essays, conceptual papers, historical commentaries, comprehensive reviews, case studies, policy analyses, and innovative practice reports and evaluations on a wide variety of issues and topics related to the O&M of people with vision impairments. The Editors also aim at providing a forum for discourse, debate and critical analyses on any aspect of O&M, for example, existing philosophies, policy or practice. All manuscripts submitted to the IJOM are subject to a masked or blind review process. The categories currently available for publication include reports of original research, practice reports and commentaries. Manuscripts are accepted for publication with the understanding that they have not been published elsewhere.

Website: http://ijorientationandmobility.com/index.php?module=home

International Mobility Conference 14, New Zealand

You are cordially invited to attend IMC14, the fourteenth International Mobility Conference, to be held in Palmerston North, New Zealand from 13 to 17 February 2012.

IMC provides a forum for all those interested in the various factors which affect the mobility of persons who are blind or visually impaired. These events draw delegates from all over the world and feature presentations in best practice, innovation and research, as well as informal meetings, discussion and opportunities to get to know one's international colleagues. The theme for IMC14 is 'Mobility through the Ages: Up Over and Down Under'. As such, we will be featuring the newest in trends, practices and information related to the acquisition of independent travel for children, adults and older adults. We will also endeavour to give you a real 'Down Under' experience while you enjoy our summer weather. The conference venue is located at the heart of the central business district of Palmerston North. 'Palmy' is a small city of 75,000 people with a large student population and plenty of cafe's, restaurants, and bars within easy walk of the Convention Centre, hotels, and motels. It is a friendly city with a relaxed atmosphere.

Steve La Grow
Chair - IMC14 Conference Committee http://www.imcl4.com/page.php?1

Vision Australia's Further Education Bursaries

Each year Vision Australia awards bursaries to tertiary students who are blind or have low vision consisting of adaptive technology such as CCTVs, laptops, screen reading and magnification software. Such technology enables easier access to course materials.

Vision Australia's Further Education Bursary aims to assist clients who would not otherwise be able to afford adaptive technology, thus increasing their ability to participate in further education. Since 1996, 220 bursaries have been awarded by Vision Australia to students studying a broad range of disciplines - from Arts and Music to IT and Business.

Each year a Victorian Bursary Recipient who is judged by our selection committee to best display a need for the equipment and ability to be successful in their studies will also receive the Fairhall Memorial Scholarship of $150.

Who is eligible?

To be eligible, applicants need to:

- Be an Australian citizen or permanent resident of Victoria, New South Wales, the Australian Capital Territory, Queensland, the Northern Territory or Tasmania.
- Be (or become) a client of Vision Australia
- Demonstrate the need for financial assistance to purchase adaptive technology
- Be applying for, or enrolled in, a tertiary course graded Certificate IV or above.
- Be available to attend a presentation ceremony in May.

How to apply?

To apply for a bursary, applicants need to:

- Complete an application form - download available from the start of August at www.visionaustralia.org.au/bursary
- Have a bursary specific adaptive technology assessment with a Vision Australia consultant
- Provide some documentary evidence (outlined in the application form).

(Applications are treated in the strictest confidence.)

Important dates

Applications open in August and close at the end of October. Recipients are selected in December, equipment is purchased and delivered after proof of enrolment has been provided (around March) and there are presentation ceremonies in May.

For more information contact:

Max Bini, Tertiary Education Consultant,
Freecall: 1300 84 74 66
Direct line: 03 8378 1223
Email: max.bini@visionaustralia.org
www.visionaustralia.org

VTAC coming to Vision Australia Kensington Melbourne

VTAC staff members are coming to the Kensington office of Vision Australia to assist future further education students who are blind or have low vision with their VTAC applications, including SEAS and Scholarship applications for study in 2012, on Wednesday 31 August 1pm to 4pm.

Please contact Max Bini Tertiary Education Consultant max.bini@visionaustralia.org or phone 03 8378 1223 if you wish to attend or have more questions.

Matching Assistive Technologies with Learning Goals

Dear Educators,

Over the past three decades, HumanWare has been offering a complete range of innovative assistive technology solutions that empower students who have a vision impairment. Since the very beginning, our focus has been to ensure that the assistive technologies developed enhance the learning experience in schools as well as facilitate other areas such as organisation, independence, orientation and mobility, as well as leisure and recreation.

We understand that in the context of getting the most value from school budgets and funding sources, educators will be under pressure to invest monies wisely. It is with these points in mind that we want to tell you of a significant and exciting technology development that has occurred since our last update in JSPEVI.

In November 2009, HumanWare brought out a new generation of BrailleNotes and VoiceNotes, known as the BrailleNote Apex family. These are the lightest and most slimline notetaking devices of their kind, at only 2CM thick and 812 grams for the 32-cell model. All units 'speak' but you can turn the voice off or use headphones. There is the choice of Braille or QWERTY keyboard input and the choice of 32, 18 or no cells. The last option, the VoiceNote, is great for students who need something portable with speech output but are not Braille readers.

The Apex incorporates recent advances in technology to provide the user with much more storage space, connectivity options and a quick way to connect a monitor so you can see the student's work.

The Apex range allows your student to do far more than just notetaking though. The easy to use, intuitive software, KeySoft, allows your student to surf the web and send

and receive emails, so they can quickly perform research, or exchange work with teachers - no need to wait for hard copy Braille production.

The word processor, DAISY and media players add versatility to the formats of information that they can work with, and the calculator, diary, address book and printing functions mean your students can always be productive and organised.

As an integrated solution provider, we offer a comprehensive suite of pre- and post-sales services for all of our products. This includes consultancy to help you get the right device to meet the needs of your student, product demonstrations and quick provision of quotes and other requested printed material.

When acquiring a BrailleNote Apex, you can rest assured that you and your student will be using it within no time. It comes with easy-to-follow tutorials and guides. Additionally, HumanWare offers free on-site training and workshops. These are provided by our product specialists who use the same technology over the course of their daily lives, whether they are at home or at work. Training can be customised to meet the needs of teachers and students.

We would be very happy to elaborate on the above and answer any questions you have. Please contact us on 02 9686 2600 or email: au.sales@humanware.com

Website on working with older students

Materials for the various windows platform and office products using JFW and Window Eyes as well as zoomtext and a textbook on designing accessible websites using HTML. Especially useful for working with older students. There are reasonable costs for these supports, with an online payment facility.

Website at: http://vww.blindtraining.com/index.html

From Jodie Hoger, Teacher Consultant (vision), Equity Services TAFE NSW

New equal access Wii game

The Royal Dutch Visio, Centre of Expertise for blind and partially sighted people has launched a unique game for the Wii game computer. For the first time children with and without vision impairment can play together on an equal level, thanks to the game called 'The Explorer and the Mystery of the Diamond Scarab'. The game is available in an English version.

The Wii game 'The Explorer' can be ordered via the webpage www.visio.org/Wii-game.

Phia Damsma
Sonokids Australia

Exciting new Web Resources

Julie Thorndyke

Manager, Library and Information Services
RIDBC Renwick Centre

Zoomreader for iPhone 4, app

http://appmodo.com/49082/zoomreader-for-iphone-4-an-app-for-low-vision--users

VI sonic Easter egg hunt idea from Perkins

http://www.perkins.org/news-events /news /perkins-easter-egg-hunt.html

Maths Software, Talking Clock & Eye Handbook app

Deb Lewis: SVRC Bulletins 10 & 11, 2011

Math Flash™ software helps elementary students sharpen math skills with talking electronic flash cards. This self-voicing program uses the computer's sound card to communicate instructions, drills, practice sessions, and games. Students can select their favourite fun Math Mentor character. Teachers can modify the number of problems, degree of difficulty, and insert custom problems.

Cost: $24.00 Ages = 6+

http://shop.aph.org/webapp/wcs/stores/servlet/Product_Math%20Flash_1020740P_1 0001_11051

Orb Talking Clock

It runs on 4 x A4 batteries and costs $13.95 (Canadian).

Buy online from the Braille Bookstore:

http://www.braillebookstore.com_Lview.php?T=Orb+Talking+Clock

Eye handbook for your phone

A free application that works on your iPhone or android devices and includes:

- testing e.g. Snellen, colour vision etc
- vision symptoms
- eye atlas and much more

When searching, look for 'Eye Handbook' - it is the Cloud Nine Development version.

Further information, visit:
http://bmctoday.net/glaucomatoday/2010/10/article.asp?f=the-eye-handbook

Macular Degeneration: Low Vision Aids and Technology

The Macular Degeneration Foundation, in collaboration with NSW Department of Health, has produced a new publication called Low Vision Aids & Technology - A Guide.

It provides information on the different types of aids, equipment and technology which can assist those with low vision in many different settings from home to work. The guide answers key questions often asked by people with low vision, their family and carers. It also provides examples of how aids and technologies have helped many people with a vision impairment to achieve the goal of maintaining quality of life and independence.

To order a copy of Low Vision Aids & Technology - A Guide please call 1800 111 709.

Download the PDF from:

http://www.mdfoundation.com.au/LowVisionAidsandTechnology.aspx

SPEVI Councillors for 2011 - 2013 - Executive - Australia

President

Paul Pagliano Ph (07) 4781 5424 Paul.Pagliano@jcu.edu.au
Past President (Now Vice President)
Sandie Mackevicius
sandie.mackevicius@visionaustralia.org

Secretary

Tim Crowe-Mai
Ph (08) 8232 4777
rcrowemai@rsb.org.au

Treasurer

Sheila Klinger
Ph (08) 8277 5255
sheila.klinger@sasvi.sa.edu.au

Membership Secretary

Hellen Riley
Ph (08) 8298 0942
nellen.riley@cando4kids.com.au

SPEVI Blog

Chrissie Butler and Stephen Bellamy
Stephen.Bellamy@Blennz.school.nz
Chrissie.Butler@blennz.school.nz

Journal Editor

Mike Steer
Ph (02) 9872 0814
mike.steer@ridbc.org.au

Access Coordinator

Phia Damsma 0415 886 565
phia@sonokids.com

Political Advocate

Nicole Donaldson Ph 07 3373 4547
ndona5@eq.edu.au

ICEVI Representative

Frances Gentle (and ICEVI Pacific Regional Chairperson) Ph (02) 9872 0808
frances.gentle@ridbc.org.au

Roundtable Representative

Leanne Smith
Ph 0407 113 267
lsmit65@eq.edu.au

ABF Representative

Jane Brown (Employment Committee)
Ph 0423 208 559
ja.neemily_brown@hotmail.com

Conference Convenor

Jane Wells Jane.Wells@Blennz.school.nz

Public Officer

David Rice davericesydney@gmail.com

Branch Councillors

Australian Capital Territory Councillor

- TBA

New South Wales Councillors

- TBA
- Alison Stephen Alison.stephen@det.nsw.edu.au
- Celia Vild Ph: (02) 9872 0291 Celia.vild@ridbc.org.au

New Zealand Executive

- Sue Spooner, President s.spooner@ace.ac.nz
- Sharon Duncan, Councillor sharon.duncan@clear.net.nz
- Jude Shelley, Treasurer Jude.Shelley@Blennz.school.nz
- Judy Allison, Secretary jaallison@xtra.co.nz

Northern Territory Councillor

- TBA

Pacific Councillors

- TBA

Queensland Councillors

- Angelique Rejmer: Ph 0415 889 627 arejml@eq.edu.au,
- Jenny Bos: Ph 0408 878 305 jbos7@eq.edu.au
- Jane Brown: Ph 0423 208 559 janeemily_brown@hotmail.com

South Australia Councillors

- Hellen Riley: Ph (08) 8298 0942 hellen.riley@cando4kids.com.au
- Skye Jones: Ph (08) 8277 5255 skye.jones@sasvi.sa.edu.au
- Rhonda Avard: Ph (08) 83778000 rhonda.avard@seaviewhs.sa.edu.au

Tasmania Councillor

- TBA

Western Australia Councillor

- Tania Dick Ph: (08) 9426 7122 Fax (08) 9426 7166
  Tania.Dick@det.wa.edu.au

Victoria Councillors

- Louise Curtin Ph: (03) 9864 9546 louise.curtin@visionaustralia.org
- Dean Johnson Ph:(03) 9854 4506 dean.j@guidedogsvictoria.com.au
- Linda Doak doak.linda.m@edumail.vic.gov.au