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# **South Pacific Educators *in* Vision Impairment**

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### **Role of the SPEVI Journal**

The South Pacific Educators in Vision Impairment (SPEVI) Inc. is the major professional association for educators of students with vision impairments in Australia, New Zealand and the South Pacific region. SPEVI acts as the professional body in matters pertaining to the education and support of preschool and school-age students who are blind, have low vision, deaf-blindness, or additional disabilities.

The Editorial Committee intends the Journal to be a vehicle for informing researchers, administrators and educators working in government and non-government education organisations, as well as specialist and generic teachers, orientation and mobility (O&M) instructors, allied professionals, parents and others in our communities about research, issues, policies and their implications for practice in Australia, New Zealand and the Pacific Region.

### **Editorial Committee**

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Opinions expressed in this publication do not necessarily represent the views or policies of SPEVI and have been presented to stimulate informed debate.

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### **SPEVI Journal Subscription and Membership**

SPEVI membership is open to educators, professionals and parent groups supporting children and adults with vision impairments. This Journal is provided free of charge and is available on the SPEVI website: <https://www.spevi.net/jspevi/>

Membership information and forms are available on the SPEVI website: <https://www.spevi.net/join/>

### **Call for Articles**

Original manuscripts, reports and news items are sought for the refereed and non-refereed sections of the next issue of JSPEVI. Topics appropriate for the journal include, but are not limited to the following:

- original research studies, with practical relevance to education of persons who are blind or vision impaired,
- literature and book reviews,
- conceptual, policy or position papers,
- descriptions, reviews or evaluations of innovative instructional curricula, programs or models of education for persons who are blind or vision impaired, and
- letters to the Editor

## Letters to the Editor

Members of the editorial committee 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 committee invites letters that explore the many issues facing professionals and families supporting learning with sensory disabilities, particularly those arising from articles in the journal.

## Guidelines for Contributors

Manuscripts that are of a scholarly nature should be submitted electronically, with the content subdivided into the following two files:

### File 1 Author information

Authors must submit a separate file containing (a) the manuscript title, (b) author or authors' name, professional title/status and organisational affiliation of authors, and (c), preferred contact details (address, email, fax, telephone) for the principal author (or co-author) who will be handling correspondence.

### File 2 Manuscript

**Manuscript presentation:** Manuscripts should be submitted in Arial 11-point font, double line spaced, with left aligned paragraphs, 2.54cm page margins (normal margin setting) and numbered pages. A running title header should be included on each page (with no authorship information included).

**Size limit:** The preferred size limit for scholarly manuscripts is 5000 words or less. The preferred size of agency reports is one A4 page of single line text.

**Abstract:** Academic manuscripts should include an abstract of 120 words or less, giving a brief summary of the overall content. The abstract may be followed by a list of key words.

**Figures and tables:** Numbered figures and tables should be included in the manuscript. Tables should be created using a table function, and figures submitted in Black and White, with consideration to the readability of the figure when reduced for publication.

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**Compliance with ethics requirements:** For manuscripts reporting original research studies, authors are responsible for ensuring that the reported research has been conducted in an ethical and responsible manner, with full compliance with all ethical requirements and legislation. This includes adherence to privacy and confidentiality guidelines regarding publication of participant information, including de-identification of participants' information and data. Authors must confirm in the manuscript that written consent has been obtained prior to publication if participant information is included. Where such a person is deceased, authors are responsible for securing written consent of the deceased person's family or estate. Authors are encouraged to consult the Australian Government National Health and Medical Research Council's **National Statement on Ethical Conduct in Human Research (2007) – Updated 2018**, see <https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018>

**Manuscript review process:** Manuscripts will be acknowledged upon receipt. Following preliminary editorial review, articles will be sent to members of the Editorial Advisory Panel and where warranted, to consulting reviewers who have particular expertise in the subject. This journal uses the "blind review" system. Reviewer feedback will be sent to the author/s with an invitation to revise the manuscript content and/or respond to the reviewers' comments. The review process may sometimes take up to three to four months. The names of consulting reviewers will periodically be published in the journal. Reviewed manuscripts will remain the property of South Pacific Educators in Vision Impairment (SPEVI). Authors will be advised in writing if their manuscripts are not accepted for publication.

**Manuscript submission:** Please forward your contributions for the 2021 issue of JSPEVI to the Editor, Dr Bronwen Scott, Email: [bronscott@iinet.net.au](mailto:bronscott@iinet.net.au)

## Editorial

**Dr Bronwen Scott**

Welcome to JSPEVI's thirteenth volume. This edition of our regional journal comes as we continue to adjust to the challenges and changes to our professional practice as a result of COVID-19. It is also the 20<sup>th</sup> anniversary of the Journal, with the first edition being published in 2000 by Dr Mike Steer. Many of the previous editions are currently available to download at the SPEVI website (<https://www.spevi.net/jspevi/>) and we are currently in the process of converting the last remaining print volumes to a digital format. Many thanks to Phia Damsma, Frances Gentle, and Lena Karam for their work in this process.

The journal aims to provide a forum for scholarly exchange among organisations and individuals who support and promote education for learners with vision impairment. This year marks the first year that the journal will be available in an open-access digital format only, in order to allow the widespread sharing of information. The SPEVI Committee of Management is currently investigating options to also have a braille file available for each edition.

Our first paper in this edition is one that is particularly interesting to me in my role as an Orientation & Mobility Specialist. Emma Sutherland presents a study investigating parental perspectives of stigma in relation to the use of the long cane. Through the use of interviews, she investigates a range of themes, finding both positive and negative experiences for parents who have a child who is a long cane user. Emma identifies the importance of acknowledging the potential of stigma around long cane use and providing parents with coping strategies, skills and knowledge. This is consequential not just for O&M specialists who are providing long cane training to children and families, but also for educators and others who are working with long cane users in a range of settings.

Our second paper from Tricia d'Apice and Sue Silveira explores braille oral reading fluency of Australian and New Zealand students with vision impairment, including braille readers and dual media users. They conclude that assessment tools for students with vision impairment should include braille reading norms, and students must have continuous access to braille at school and for leisure reading.

2020 has been a challenging year for many, but there have also been many positive innovations and changes to professional practice. Our second paper from Rebekah Graham describes how the Parents of Vision Impaired New Zealand (PVI) group applied a flexible approach to assist families to fund ongoing programs for students in lockdown. Our third paper from Melissa Fanshawe describes the process of setting up Australian Communities of Practice to support the SPEVI community navigate the rapid change to online learning that occurred in many states of Australia. The concept of Communities of Practice was a key



point highlighted by Professor Mike McLinden at the SPEVI Conference in Adelaide in January 2020 – little did we know how quickly our professional practice would change!

This edition also includes a number of reports from our region, including an update on the Sonokids' Ballyland apps, the Monash University 3D printing project, a report on driving and vision, an update on SPEVI's calculator survey, and an update on what is happening in the wider Pacific region through the International Council for Education of People with Visual Impairment (ICEVI).

Those of us who attended the SPEVI Conference in Adelaide in January 2020 were thrilled to witness Phia Damsma being named a Knight in the Order of Orange-Nassau, a prestigious Dutch award. The award was presented by Marion Derckx, Netherlands Ambassador to Australia, by request of King Willem-Alexander. Congratulations Phia on your very well-deserved honour! You can read more about this in the article provided.

I would like to take this opportunity to acknowledge Professor Paul Pagliano's contribution to the journal over the years as a member of the JSPEVI Editorial Committee. For many of us, Paul's daily wrap-up was a highlight of each SPEVI Conference, and his contributions to the journal have been invaluable. I wish him well in his retirement! I am also very pleased to welcome 2 new members to Editorial Committee, Professor Mike McLinden, (Deputy Head of School of Education, University of Birmingham; Co-director of the Vision Impairment Centre for Teaching and Research (VICTAR), University of Birmingham), and Dr Frances Mary D'Andrea, (Assistant Professor of Practice, Vision Studies, School of Education, University of Pittsburgh). It is very exciting to have an international presence on the Editorial Committee as we seek to continue to share our knowledge in the field of blindness and low vision.

Finally, many thanks to our contributors, and to the JSPEVI Editorial Committee and Advisory Panel for their assistance in putting together this edition.

**Dr Bronwen Scott**

Editor

[bronscott@iinet.net.au](mailto:bronscott@iinet.net.au)

## **Presidents' Message**



**Phia Damsma, Sharon Duncan, Frances Gentle**

As we write this report, the COVID-19 pandemic continues to impact the lives of people in the Pacific Region and around the world. We look back on a year in which SPEVI members and colleagues explored new and creative ways of providing education support for children and young people with vision impairment and their parents/carers and class teachers. Oftentimes this support has included navigating home-schooling arrangements with schools and families, while working from home and caring for loved ones. As SPEVI Co-Presidents, one of our main roles is to support members by sharing information and facilitating professional collaboration. This role has become particularly important during the global pandemic, and we invite you to contact us if you have suggestions for how SPEVI can provide support.

We are thankful to SPEVI members who have provided leadership or initiated activities on behalf of SPEVI during the year at national and local levels. In this report, we present an overview of the key activities undertaken by SPEVI during 2020.

### **Committees of Management**

The SPEVI Committees of Management (COM) met on a regular basis during the year. A combined Australia, New Zealand and Pacific COM meeting was held during the SPEVI Conference in Adelaide in January 2020, and a combined Australia and New Zealand COM meeting was held by teleconference in October 2020. Such meetings are an essential way of staying connected, sharing information, and ensuring SPEVI's governance and administration requirements are addressed. Combined Australia and New Zealand meetings by teleconference will continue in 2021.

We wish to acknowledge the contributions of the Committees of Management during 2020, and extend our thanks to SPEVI office bearers in Australia, New Zealand and the Pacific Islands. The Australian COM was sorry to bid farewell to Professor Paul Pagliano who has

announced his retirement. Paul is a well-known and respected member of the SPEVI community and has contributed as SPEVI President and member of the JSPEVI Editorial Committee and Committee of Management (to name but a few). Paul is an honorary Life Member of SPEVI, and we are delighted that he will attend the virtual SPEVI Conference in January 2021. We wish Paul and his family all the best for the future.

### **SPEVI Inc Strategic Plan**

SPEVI Inc. (Australia) has developed a Strategic Plan for 2020-2024. The Plan addresses SPEVI's Mission and Aims and focuses on supporting and promoting the profession of Specialist Teacher (Vision Impairment), including the important role of specialist teachers in preparing students with vision impairment for full inclusion in education, employment and society. SPEVI promotes the importance of higher education qualifications for Specialist Teachers (VI) through its publications, conferences and events. The Strategic Plan is available for download from the [SPEVI website](#).

### **Membership**

SPEVI Inc. has moved to an online membership system which enables new members to complete the relevant membership forms on the SPEVI website. The system currently accepts memberships from Australia and Pacific Island Countries, with New Zealand applications directed to the SPEVI NZ Secretary. The Australian Committee of Management is currently exploring changes to the fixed two-year membership period, to allow members to join at any time during each SPEVI biennium, with renewal reminders sent automatically when renewals are due. For information about the different categories of membership, please visit the [SPEVI website](#). We encourage you to connect colleagues and parents with SPEVI, and to join the SPEVI and ICEVI-SPEVI email lists.

### **SPEVI 2020 Conference**

The SPEVI 2020 Conference took place in Adelaide, South Australia, from 12-15 January 2020. The Conference theme was "Creating a clear vision for the future". The Conference was an incredible success and we sincerely thank members of the SPEVI South Australia Local Organising Committee for creating a memorable conference. We also acknowledge the professionalism of Synergy Events, our event management company, and everyone who contributed to the success of the conference.

The conference venue was excellent, the keynote presentations inspiring, and the program offered exciting and informative presentations of high quality. The welcome event and gala dinner (with live music and comedian) offered opportunities for socialising with friends old

and new. Who could have foreseen how quickly the national and international circumstances would change as the COVID-19 pandemic took its hold in the months after the conference?

### **SPEVI 2021 Conference**

SPEVI has traditionally organised a conference once every two years. However, due to the postponement of the January 2019 SPEVI conference to January 2020, we needed to realign our conferences with other major regional events in Vision Impairment education that take place in the alternate years to the SPEVI conference. The Committee of Management determined to host a Conference on 18-19 January 2021, thereby restoring our usual biennial conference cycle. As a result of the significant health concerns associated with hosting in-person events during the pandemic, SPEVI decided to host the first ever virtual Conference.

The 2021 Conference Theme of 'Celebrating Change' reflects the special circumstances under which this online event takes place. We sincerely thank the outstanding contribution of members of the inaugural Virtual Conference Committee (VCC): Ben Clare (Chair), Kerri Weaver, Jane Brown, Kay Hood, Sharon Duncan, Tricia d'Apice, and Sue Silveira. We also thank the event organiser, RIDBC Renwick Centre, keynote speakers and presenters who shared their knowledge and expertise in VI education research, professional practice, and parenting. We also extend our thanks to conference sponsors, Quantum RLV (Level 3 sponsor); and to Blind Citizens Australia, Sonokids Australia, and Reach & Match (Level 2 sponsors).

If you were unable to attend the conference, there is an option to access recordings of the conference sessions by registering on the [Conference website](#).

### **SPEVI Conference Papers Archive**

The SPEVI Committee of Management continues to offer an open access repository on the [SPEVI website](#) of the conference presentations and papers, commencing with the 2013 conference. This repository is a valuable contribution to researchers and educators in Vision Impairment education in Australia, New Zealand and internationally. We extend our thanks to Lena Karam of RIDBC Renwick Centre for undertaking the work required to obtain the presentations and papers and upload them in PDF format to the SPEVI website.

### **SPEVI Community of Practice**

In late March 2020, under the leadership of SPEVI Vice President Melissa Fanshawe, SPEVI initiated an online 'Community of Practice' with the aim of sharing opportunities and barriers in education provision for learners with vision impairment during the COVID-19 pandemic. To date, five online meetings have been held, with participants including

Australian and New Zealand professionals and parents supporting children with vision impairment who were learning at home during COVID-19 school closures.

The SPEVI Community of Practice has provided a platform for professional development and the sharing of resources and best practices and has served as a central point of contact for educators during the pandemic. The participants have contributed to an open access list of online resources which is available for download from the [SPEVI website](#). The list is a “living document”, and SPEVI members are invited to contribute additional information about online resources and organisations supporting families and professionals during the COVID-19 pandemic.

A survey has been conducted by SPEVI to investigate the value and content of the meetings going forward. As a result, the SPEVI Community of Practice meetings are set to continue in 2021.

### **SPEVI Calculator Survey**

During the 2020 SPEVI conference, Pranitha Moodley delivered a presentation on the results of her 2019 SPEVI member survey which explored the use of accessible calculators by secondary students with vision impairment. Survey responses were received from Specialist Teachers (Vision Impairment), students in senior secondary school, higher education students, young people with vision impairment who are employed, parents and teaching assistants. In her conference report, Pranitha noted that several of the participants reported that a discussion on accessible calculators was long overdue and applauded SPEVI for taking this initiative. Pranitha also reported that several participating Specialist teachers (VI) highlighted the need for additional information about the range of accessible calculators for secondary students. A working group has been established to make recommendations, and educators are encouraged to join the SPEVI Facebook page, entitled ‘Educators supporting students with V.I. in Maths’. This Facebook Group currently has more than 130 active members, and provides a platform for discussion, the posting of questions and sharing of ideas about calculator usage and options for students with vision impairment.

It is noteworthy that in September 2020, the NSW Education Standards Authority (NESA) reviewed the Orion TI-30XS MultiView Talking Scientific Calculator and determined that it met the requirements for NESA approval. The calculator will be placed on the NESA Approved Scientific Calculator List for use in the 2022 Higher School Certificate (HSC) examinations and beyond.



## **SPEVI Member Support**

### **Member Projects**

SPEVI is a professional association of individual members. The Committee of Management recognises the importance of supporting innovative projects and technologies undertaken by SPEVI members. During 2018-2020, SPEVI was a proud sponsor of the Monash University “Accessible 3D Printed Graphics” project, a three-year Australian Research Council (ARC) Linkage research project. We congratulate the Monash research team for their work to date and look forward to learning about the project outcomes. This project concluded in 2020.

SPEVI has also offered in-principle support to two research studies that are currently undergoing human research ethics approval.

SPEVI members may apply for a funding contribution from SPEVI for member projects, activities, or events that are aligned with the SPEVI Mission and Aims. The SPEVI Members Project Application Form will be available from the SPEVI website in the near future, and submissions should be sent by email to the [SPEVI Secretary](#).

### **Supporting members’ professional Development**

**SPEVI-RIDBC partnership:** SPEVI Inc. is partnering with RIDBC Renwick Centre to offer SPEVI member discounts for professional learning events in Vision Impairment education. This collaborative partnership directly addresses SPEVI’s aim of “encouraging the highest standards in the educators of persons with vision impairment by promoting research and professional training for general and specialist teachers”. The partnership also acknowledges the efforts of both SPEVI and RIDBC Renwick Centre to promote and support the right to quality education for children and young people with vision impairment and their families.

Following the success of the 2020 partnership, the Committee of Management has agreed to continue the pilot in 2021.

**SPEVI-SVRC partnership:** SPEVI Inc. has commenced discussions with the Statewide Vision Resource Centre (SVRC), Victoria, to promote SPEVI member participation in the 2021 SVRC professional learning program. As with the RIDBC collaboration, the aim is to encourage the highest standards in the educators of children and young people with vision impairment, and as a result, to help to ensure they receive a quality, equitable education.

### **Honorary Awards**

SPEVI bestows honorary life membership and special recognition awards to members who make an outstanding contribution to the field of education for persons with vision impairment. Honorary Life Membership was awarded to Josie Howse during the SPEVI Annual General

Meeting, held in conjunction with the SPEVI Adelaide Conference in January 2020. Josie's contribution to the field of vision impairment in Australia and internationally has spanned more than 40 years. In 2019, she retired from the NSW Department of Education, after a career in blindness education that commenced in 1979 as a teaching assistant at the Department's North Rocks Central School for Blind Children; and concluded as Manager of the NSW DET Braille and Large Print Service in 2019.

SPEVI New Zealand bestows the Barbara Armitage Award to members who make a substantive contribution to the field of VI education in New Zealand. The award was established in 2003, in memory of Barbara Armitage who, at the time of her death, was a Resource Teacher Vision based in Dunedin.

SPEVI Members are invited to submit detailed nominations for the honorary awards to the SPEVI Committees of Management in Australia or New Zealand. A list of recipients of SPEVI's honorary awards is available on the SPEVI website – see

<https://www.spevi.net/awards/>

### **Submissions on behalf of members**

SPEVI welcomed greater collaboration with Blind Citizens Australia (BCA) and Deafblind Australia (DbA). In June 2020, SPEVI contributed to the Blind Citizens Australia submission to the Disability Royal Commission Issues Paper on Emergency Planning and Response. SPEVI provided BCA with a summary of the key issues identified by professionals and parents supporting children and young people with vision impairment within the context of the COVID-19 pandemic in Australia. SPEVI also strongly encouraged an evaluation of the experiences of students with vision impairment and their teachers during the pandemic, in order to learn from these experiences, prepare for future emergencies, and build on positive outcomes from the required transition to home-based online learning for Australian children during the pandemic.

In September 2020, SPEVI submitted a response on behalf of members to the 2020 review of the Disability Standards for Education 2005. Sincere thanks go to Melissa Fanshawe for leading the discussions with members, including the Community of Practice online meeting in September. The SPEVI submission was also provided by Blind Citizens Australia and Deafblind Australia (DbA) for use in preparing their submissions.

### **In Memory**

The COVID-19 pandemic has touched the lives of parents and professionals in the field of disability around the world. SPEVI joins ICEVI in paying tribute to Mr A.K. Mittal, Secretary General of the World Blind Union, and President of the All India Confederation of the Blind.

Mr Mittal passed away in September 2020 and leaves behind a 50-year legacy of contribution to the field of education for children with vision impairment. Mr Mittal was a passionate advocate for braille literacy and the right to education for children who are marginalised due to their disability.

In concluding this message, we congratulate Dr Bronwen Scott and the Editorial Committee and Review Panel, as they deliver another excellent edition of the journal.

**Phia Damsma, Sharon Duncan and Frances Gentle**  
SPEVI Co-Presidents, 2020

## **Stigma and the long cane: Parental perspectives**

**Emma Louise Sutherland**

### **Abstract**

By identifying the role of the long cane as a “stigma symbol”, this study aimed to investigate parental perspectives of stigma, specifically seeking to understand the complex nature of stigma and the importance “visibility” (i.e., use of the long cane) has on these experiences. Semi-structured interviews with three mothers of children with vision impairment were analysed for experiences relating to the components of stigma as identified by Link and Phelan (2001) and Link et al. (2004). The results indicated the presence of stigma components in both negative and positive parent experiences, with the nature and degree of parental reactions to be associated with resilience, context, knowledge and stress. The study found the long cane played a specific role in increasing public awareness of vision impairment. The results highlighted the need for further investigation as well as provision of support, knowledge and strategies for parents.

### **Introduction**

Stigma, as defined by Goffman (1963), is a discrediting effect whereby an individual is considered to have a failing, or shortcoming which deviates from the “norm”. Across the field of disability research, the definition of stigma varies, however, consistent is the understanding that stigma is a socially constructed concept where an individual is devalued due to possessing a particular attribute or characteristic (Crocker et al., 1998; Stafford & Scott, 1986; Susman, 1994). Due to the widely varied nature of the definition of stigma across disciplines and circumstances, Link and Phelan (2001) conceptualised the five core components of stigma as *labelling*, *stereotyping*, *separation*, *status loss*, *discrimination*, occurring together in a situation involving difference in *power*.

*Labelling* is the designation and categorisation of an individual based on social labels (such as black, white, handicapped, blind, sighted, gay, straight) (Link & Phelan, 2001). These differences or categorisations are considered to have social import (compared to eye

colour, or food preferences) and indicate the importance of the social process of stigmatisation. *Stereotyping* refers to the interrelation of the label linking a person with culturally defined pre-conscious judgements about the person. These judgements are based on “a set of pre-determined undesirable characteristics that form a certain stereotype” (Link & Phelan, 2001, p.369).

*Separation* occurs when a reaction to these stereotyped characteristics results in a distinction between “us” and “them”. *Status loss* is an almost immediate consequence of negatively labelling, stereotyping and separating an individual. It is suggested by Link and Phelan that this process constructs a rationale for devaluing an individual and pushing that individual downward in the social hierarchy.

*Discrimination* can result in disadvantageous outcomes for an individual when structural and individual discriminations are created. These discriminations can be overt or subtle actions against the individual. Importantly, Link and Phelan believe it is the convergence of these five components of stigma under the overriding umbrella of *power* that results in stigma occurring. It is noted that a power imbalance, either economic, social or political, may be taken for granted and considered unproblematic or not obvious. In relation to disability, Murphy et al. (1988) recognised that those with disability have an “undefined status” (p.235), where they are considered “less fortunate” than others and should therefore “strive to achieve normality” (Phillips, 1990, p.850; Susman, 1994). This undefined status automatically creates a social power imbalance that allows stigma to occur. Finally, Link et al. (2004) suggested a sixth component of stigma, termed *emotional response*, and identified this component as critical to understanding the behaviours of both enactors and recipients of stigma.

Stigma has been identified as existing as a “matter of degree” (Link & Phelan, 2001, p.377), whereby some groups are more stigmatised than others. Goffman (1963) and Jones et al. (1984) identified such elements as visibility, permanence, severity, concealability, course, disruptiveness, aesthetics, origin and peril to be underlying factors which contribute



to the level of stigmatising experiences. Drawing on the element of “visibility”, Goffman (1963) identified *discredited* (visible) and *discreditable* (concealable) stigmas. While Goffman suggested that individuals may experience both aspects of the element of visibility, research by Livneh et al. (2014) has identified specific disabilities as being more, or less, visible than others. Specifically, Livneh et al. suggested that vision impairment is a discredited condition “because of the accessories used to manage its functional limitations” (p.98). This statement implies that vision impairment is a discreditable (concealable) condition when such orientation and mobility tools and the long cane are not used. In essence, the long cane may be perceived as more than simply an orientation and mobility tool, but as a potential *stigma symbol*.

Stigma symbols are identified as signs which convey social information (Goffman, 1963). In the case of disability, stigma symbols draw public attention and increase an individuals’ status to a person with a disability (Green et al., 2005; McHatton & Correa, 2005; Ryan, 2005). Research into stigma symbols, such as wheelchairs and major buggies, has resulted in mixed views, with positive associations to “provide advanced warning” (Ryan, 2005, p.298), and negative experiences of using an “outward symbol” (Green et al., 2005, p.203) of disability. Research into the long cane as a stigma symbol has predominantly focused on adults with progressive and degenerative vision impairments (Fourie, 2007; Hersh, 2013; Hogan, 2012). These studies describe the long cane as advertising disability, a “white cane spotlight”, and a marker of vision impairment. Adult participants in studies by Fourie (2007) and Hogan (2012), identified the progression from “normal” to “disabled”. The adult participants experienced loss and grief as they accepted the change in their level of vision and their emergent new identities as persons with a disability. The Fourie and Hogan studies echoed the conventional societal image of disability and the presumption of normality, where deviations from “normal” are considered “undesired differentness” (Goffman, 1963, p.5). Individuals who are able to conceal their disability will do so (Jones et

al., 1984), to avoid being seen as victims, invalids, or “damaged goods” (Phillips, 1990, p.855).

In contrast, Scott (2014) identified the long cane as “a recognisable tool” (p.169), which “makes blindness visible” (p.174). Scott suggested that societal recognition of the long cane enabled children with a vision impairment to gain independence due to the pre-existing public understanding of “what it is to be blind”, based on the outward symbol of the long cane. However, Susman (1994) suggested that while symbols such as the long cane are helpful, they often also assist in developing a *master status* where the disability, or more specifically recognition and awareness of the disability, overshadows personal identity.

While it is assumed that stigma is only experienced by the person with the stigmatising attribute, it is argued that stigma can also impact on the lives of those close to the individual (Goffman, 1963; Moses, 2014). Research involving caregivers of children with a disability (Fernández & Arcia, 2004; Green, 2003a; Green, 2007; McHatton & Correa, 2005; Neely-Barnes et al., 2010; Ryan, 2005; Stalker & Connors, 2004) has found that stigmatisation of children with a disability also leads to the social debilitation and stigmatisation of family members. Such studies found feelings of being watched or judged negatively (Fernández & Arcia, 2004), fear of pity (McHatton & Correa, 2005), and maternal distress (Green, 2003a); as well as parental growth and feelings of positivity and increased value of life and relationships (Green, 2007). Interestingly, in contrast with Goffman’s (1963) notion of concealment, research by Neely-Barnes et al. (2010) found “parents made choices about how much information to present to the community and when to do it” (p.255).

The present study explored the complexity of parental experiences of three mothers of children with congenital vision impairment. In particular, the researcher examined the presence of stigma, impact of the long cane as a stigma symbol, and the emotional complexity associated with stigmatising experiences.

## Methods

### Participants

Three mothers of children with congenital vision impairment were recruited from the Australian Childhood Vision Impairment Register (Royal Institute for Deaf and Blind Children [RIDBC], 2015). RIDBC sent information to potential participants, whose child met the study's criteria of being on the Register and currently using the long cane. Two participants were recruited by RIDBC, and the third was personally known to the researcher. All participants met the recruitment and ethical requirements of the study.

Demographic information was collected on each mother's family structure and background, employment status, and the focus child's vision impairment diagnosis, level of usable vision, use of the long cane and proficiency of usage.

All three mothers come from an English-speaking background. All families consisted of two adults and two children, and all siblings were the same sex as the focus child. Table 1 presents an overview of the demographical information compiled for the three participating mothers and their children with vision impairment.

**Table 1:**

*Focus child information*

<b>Focus children and parents</b>	<b>Age</b>	<b>Medical diagnosis (age) and additional disabilities</b>	<b>Vision impairment level and details</b>	<b>Cane use: Commencement age and level of proficiency</b>
Child Hilary (F), Mother Valerie	17 yrs 3 mths	CHARGE syndrome (birth) (specifics: coloboma of both eyes, right sided facial palsy, hearing loss) Anaphylaxis, asthma	<u>Severe</u> Right eye: 6/60 Left eye: 2/60 Vision fluctuates with fatigue	10 yrs Somewhat independent, building balance skills

Child Ryan (M), Mother Ruth	11 yrs 3 mths	Aniridia with developmental glaucoma Language, learning development problems	<u>Severe</u> Right eye: 1/60, light perception only	3 yrs	Good at using and relying on cane, does not use to full potential
Child Liam (M), Mother Janet	3 yrs 10 mths	Leber's Congenital Amarosis (birth). IFT140 gene mutation (3 ½ yrs) Kidney problems (potential failure), skeletal abnormalities (impact on development is unknown)	<u>Severe</u> No vision, no detectable light perception	14 mths	Comfortable holding cane, understands use, and knows it provides information, not currently employing correct techniques

*Note:* Ages and cane proficiency were current at time of interview.

As shown in Table 1, all three children have additional disabilities. It is important to note that Hilary's additional disabilities are also potentially considered stigma symbols separately (such as facial palsy, behavioural disabilities and use of sign language). In contrast, both Liam and Ryan's additional disabilities are somewhat concealable, and their vision impairments are only evident through irregular eye movements or use of sunglasses.

It is worth mentioning that Ruth's husband also joined in for part of the interview. His responses echoed those of his wife, and as such, were coded similarly.

### **Data Collection**

In contrast to similar studies by Green (2003a; 2003b); and Green et al. (2005), this study adopted a one-on-one interview process. This decision was based on the ethical challenges associated with group interviews, and the potential impact of group discussion on personal opinion. As noted by Wutich et al. (2010), "it is difficult to know what extent people would express the same opinions in a focus group that they would in an individual response format" (p.90). In the present study, each participant was provided with the interview

questions prior to the interview. Additional probing questions were also used during the interviews to elicit further information when required. All questions were focused on the personal experiences of the parents when their children were using, and not using, the long cane in public.

## **Results**

The interview transcripts were examined for themes related to the Link and Phelan (2001) and Link et al. (2004) components of stigma: *labelling; stereotyping; separation; status loss; discrimination* and *emotional response*. A similar approach to analysis was used by Green et al. (2005), who used the six components of stigma to examine interview data. While it is acknowledged that stigma relates to the interconnectedness of these components (Link & Phelan, 2001; Link et al., 2004), in the following sections of this paper the components are discussed separately as a means of developing a deeper understanding of each component in relation to a stigmatising experience. Furthermore, participants in the present study were asked to note if they felt an experience was positive, negative, or neutral. This is a unique aspect of the present study, as past research has considered stigma in relation to negative experiences only. However, with the inclusion of the stigma component of emotional response, Link et al. suggested that while an experience may contain all components of stigma, it is the emotional response which determines the degree of negativity associated with this experience.

### **Labelling**

Labelling is the initial identification process of labelling someone as possessing a socially significant “difference”. In the present study, the label of vision impairment results in confusion, social awkwardness and a generalised comment or action based on the label (Green et al., 2005).

All three participants in this study noted the significant impact of the long cane in identifying their child as vision impaired. The researcher found that the process of labelling was considered both a negative and positive process depending on the individual situation.



Ruth, for example, identified the presence of the long cane as often beneficial, as without the cane, people were less aware of her son's disability.

I think the cane is a bit of a flag or signal for people around, that he doesn't have the vision, and that's a good thing, because then people tend to be aware of him and give him space. But when he doesn't have it, you know, that's when I end up having to fight people off in terms of they don't know [Ruth].

Similarly, Janet indicated a desire to highlight her child's use the long cane to justify certain actions on her behalf, such as using a disability parking space. In such instances, Janet actively took advantage of the labelling process that was derived from her child's long cane usage.

I do like him to get out of the car using the cane, and then people think, oh, that's why they're in that disabled parking spot [Janet].

In contrast, due to her daughter's multiple disabilities, Valerie noted the impact of the cane directing attention to one singular disability. "I guess they just think of the vision impairment and not the other stuff". She also outlined the noticeable difference in attitude of people as they noticed, and then labelled, her daughter as disabled "I know as soon as they pick it up, you can sort of see their face change". This example illustrates the significant impact of the process of labelling on the overall stigmatisation of individuals.

Analysis of the interview data found that all participants noted that without the long cane, they and their child were able to "blend in". Janet described the early years of her son's life when he was not "obviously disabled". However, she noted a significant turning point with the introduction of the long cane.

... because it's more obvious, near enough every single time I have the cane out someone feels compelled to say something [Janet].

## Stereotyping

Stereotyping involves a process of linking a label to one or more undesirable characteristics. In the case of disability, these links are often related to the concept that individuals with a disability possess a difference that is generally “unwanted” (Green et al., 2005). Consequently, interactions with an individual with a disability (or their family member) may be steeped in awkwardness, pity, sympathy and sadness. Others seeking to avoid these feelings may aim to avoid the individual with a disability or their family members. In the context of vision impairment, generalised comments and actions by the public are based on a stereotypical understanding such as providing a wide berth or physical distance.

While Valerie identified the process of stereotyping as somewhat beneficial, she also noted an additional feeling of distance due to these actions.

Because Hilary doesn't obviously cope with the crowds very well ... With the cane we get a lot more space and a bit of a wide berth. It's so much easier ... and we don't have to dodge through and deal with all that as well ...

[it] is nice that they're considerate, that they know that they have to move, but I think they overdo it and freak out. And I think it feels like we're a bit less approachable and they just want to move away ... because it keeps that distance around us [Valerie].

Ruth also indicated the benefits of the long cane in promoting such stereotyping behaviours as providing a “wide berth”. Her husband noted “it's like a parting of the sea”. Interestingly, a family story indicates that, at a very young age, Ryan himself had directly experimented with public stereotyping behaviours in response to the long cane.

He must have been ... four or five ... and he went roaring down the [supermarket] aisle one day, he goes “move, move, move” at the top of his voice, and everybody jumped out of the way, and [he] got to the end of the aisle and snap, snap, snap, folded up his cane, popped it in the trolley and walked off [Ruth's husband].

All three mothers who participated in the study identified strong stereotypical responses from the general public, including sadness, pity and sympathy. “Sympathetic looks” were described as a frequent occurrence when out in the community.

### **Separation**

In contrast to potentially less impactful results of labelling and stereotyping, separation is considered to be a deeper and more meaningful component of stigma (Link & Phelan, 2001). Separation that is based on difference results in devaluing, disrespecting, singling out, excluding or mistreating an individual. Separation often manifests in avoidance, exclusionary behaviour, staring, blaming, social separation and disrespectful comments or actions (Green et al., 2005).

Much of the separation noted by the mothers related to significant staring by members of the public, termed “the famous stare factor” by Ruth. In addition, the stare was accompanied by such questions as “what’s wrong with her?” [Valerie].

It should be noted that all mothers indicated that staring or questions from young children was “a very different situation”. In these situations, both Valerie and Ruth stated that educating children and answering their questions led to the children either apologising for their past behaviour or moving on and discontinuing their staring. Ruth said, “it is the ones that actually know better not to stare, that stare ... they’re the worst”.

### **Status Loss**

Status loss is the consequence of stigma components, resulting in a downward push in the social hierarchy and potentially creating disadvantageous outcomes. Individuals experiencing status loss may also experience limitations on social participation that is linked to friendships and close connections (Green et al., 2005).

Experiences involving status loss were only coded for Ruth, where her son had difficulty engaging with friends. This is due to several reasons, and perhaps the most obvious reason is related to her son’s age and attendance at a mainstream school. While

this may not be directly due to overt stigmatising behaviours, it is still noted (by Green et al., 2005) as a result of differences drawn from disability. Ruth, for example, shared that her son had expressed a desire to become more like his peers, and not use his cane. This desire suggests an important role that the cane plays in separating Ruth's son from his peers.

He's had it since he was three, so it's there as part of his life, but he would love the day if he didn't have to use it ... he just wants to be one of the boys [Ruth].

## **Discrimination**

Discrimination is possibly a more overt component of stigma where barriers to participation impact life opportunities (Link & Phelan, 2001). Specifically, physical structural barriers or failure to accommodate are the most common, however, discrimination barriers are also individual in nature and less overt.

The main area of discrimination most commonly acknowledged by the mothers related to the use of disabled parking spaces. As previously noted by Janet, she actively used the process of labelling to justify her use of the parking space. Ruth's husband described a potential rationale for public comments and failure to acknowledge the use of physical accommodation features such as the disability parking space.

We've been conditioned about those parking spaces ... conditioned to see ... "are they legitimately allowed to park there[?]" ... "where's the wheelchair?" [Ruth's husband].

The above statement perhaps suggests a lack of public awareness and knowledge about the purpose and eligibility of disabled parking spaces.

Ruth further noted that her son's high level of independence and confidence often resulted in a failure of the public to accommodate his requirements. People assume Ryan has a higher level of vision than what he actually does.

When I describe to them what his level of vision is, I think most people are somewhat bemused in terms of, oh, how does that work? Like he can get around, he can walk

up and down steps, he can do this, this and this, and if he was blind, surely he couldn't so given his level of vision, he surely couldn't be able to do that [Ruth].

This common misunderstanding of ability may result in people failing to properly accommodate Ryan's vision impairment or understand his mobility requirements.

### **Emotional Response**

Link et al. (2004) emphasised that the emotional response to stigma is a powerful and often under-recognised component. In the present study, this component of stigma is specifically related to the response of the individual experiencing the stigmatisation. The experience of stigma by each mother was enacted through her comments, behaviours and actions, and perhaps most importantly, her feelings. In this study, the emotional response of the mothers was the key factor in determining if a stigmatising experience was considered positive or negative.

The long cane played a particularly pointed role in the emotional response of Valerie, due to the age at which the long cane was introduced to her child (at age 10 years).

It just really felt full-on. Like I know she has a severe vision impairment, but I guess it just meant it really in our faces that now you need a cane, and it was a lot to deal with. I found it really emotionally hard to deal with ... it meant that you would have to deal more with the public as well, reactions, even more than we already have to deal with it [Valerie].

Valerie noted a pre-existing expectation that the presence of the long cane would alter public reaction and draw attention to both her daughter and herself. This increase of attention also negatively impacted on Valerie's enthusiasm to encourage her daughter to use the cane, indicating Valerie's reluctance, especially if already in an emotionally vulnerable state.



Some days that [comments] can be upsetting, if you're not in a great place yourself ... [you have to] be ready to deal with [it] ... [it is] not just ... "oh, Hilary doesn't want to use it' ... it was like "I don't really want to use it either" [Valerie].

The impact of stigma, particularly in relation to emotional response, is important because of the potentially confounding impact it has on encouraging children to use their long cane when in public.

Consistent with Valerie, Janet importantly noted how the long cane influenced her state of mind and emotional reaction, and if she perceives a comment to be positive or negative.

I feel more self-conscious when he's got the cane out as well, because I know that everybody is looking at me ... Maybe there is a difference actually, between if he hasn't got the cane and somebody says something to me, maybe I'm not feeling self-conscious to begin with and so maybe take that comment more positively. [Janet].

While Janet identifies her negative feelings and emotional responses, she highlights a distinct dichotomy between her internal feeling and external reaction. Janet emphasised that she will always "act positive, but maybe not feel the way I'm acting". This behaviour appears to be due to a sense of duty, not only toward her son with vision impairment, but also toward all individuals with vision impairment or other disability.

I always try to react positively, if I can, I guess. Because I think, me having a negative reaction is not going to help somebody. Because you want people to have positive views of disabled people [Janet].

Significantly, it was noted that Janet's positive reaction can result in altering public perception, and as a result, impact individuals who are enacting stigma. Janet highlighted one particular experience where a negative comment, when met positivity, resulted in an immediate change in demeanour and positive comments. "Once I'd given that positive response ... she just talked about him in a more normal way" [Janet].

All three mothers identified a difference in their responses to questions asked by children, as compared with questions by adults. “Kids, I’m a bit more open to and I will often explain things to kids, but when it’s adults, I can’t really be bothered” [Valerie]. “If an eight-year-old asks something, they don’t know what it is, it’s not the same as an adult” [Janet]. While, both Janet and Ruth stated they are happy to answer questions and saw their role in educating the public as a means of reducing future stigma, discrimination, or generalised “thoughtlessness”, Valerie indicated that she often feels this “isn’t her job”.

Janet notably identified the importance of time (since diagnosis) and personal education (knowing more about vision impairment) when responding to questions from members of the public. Janet stated that she feels more at ease and confident about the “right thing to say [and] about things to do with being vision impaired”.

### **Non-stigmatising**

Any experience which did not contain elements of stigma was classified as non-stigmatising. The non-stigmatising experiences these were all identified as positive, and most interestingly, were highly associated with location. Specifically, any location where disability is considered the ‘norm’ such as Vision Australia, The Children’s Hospital, the Royal Institute for Deaf and Blind Children (RIDBC), and the Guide Dogs Association of NSW/ACT. Such locations contain a sense of belonging and security for parents of children with vision impairment. “You feel like you belong there ... [it is a] safe environment” [Janet]. A space where the mothers identified an ability to relax and reduce their heightened sense of awareness of the general public.

### **Discussion**

While this study acknowledges the individual and personalised experiences of mothers of children with vision impairment, it is possible to draw links to past research on the topic. This research study found similar results as previous research regarding variability in participants’ perception of stigma (Fernández & Arcia, 2004; Jarrett et al., 2014; McHatton & Correa, 2005; Neely-Barnes et al., 2010), and the unique nature of participants’ responses

according to their individual situation (McHatton & Correa, 2005; Neely-Barnes et al., 2010; Ryan, 2005).

Research presents stigma as a discrediting effect, a failing, or handicap (Goffman, 1963) which results in negative or adverse reactions from others (Susman, 1994). Link and Phelan (2001) sought to expand on Goffman's concept of stigma but retained the notion of negativity. Negative perceptions were also found in empirical research by Fernández & Arcia (2004); Green (2003a); Green (2007); Green et al., (2005); McHatton and Correa (2005); Neely-Barnes et al. (2010); Ryan (2005); and Stalker and Connors (2004). The additional consideration of emotional response as a key contributing factor of stigma (Link et al., 2004), as well as the other components of stigma, has enabled identification of the presence of stigma within any given experience, regardless of whether the experience was deemed positive or negative by participants. In particular, the emotional response of each participant when experiencing stigma was shown to vary between internalised feelings and external reaction. All three mothers displayed resilience and the ability to use public stigmatisation to their advantage, drawing on past experiences and knowledge to handle situations and ensure a more positive outcome.

Consistent with notions of stigma symbols in general (Goffman, 1963; Green et al., 2005; McHatton & Correa, 2005; Ryan, 2005), this study has shown the significant role of the long cane in identifying, and therefore labelling, an individual as vision impaired. By drawing attention to the mobility requirements of the child, and by association, his/her mother, the long cane was deemed a positive symbol in many public situations. The study supports previous research into stigma symbols that provide "advanced warning" (Ryan, 2005, p.298), and suggests that the long cane is a tool used to not only provide orientation and mobility assistance to individuals with vision impairment, but to also make "blindness visible" (Scott, 2014, p.174). However, they also noted that the absence of the long cane assisted them in "blending in" and as a result, reduced the frequency of comments from the general public. The process of blending in led to additional challenges as the public were

“less aware” and therefore less able to respond appropriately. Perhaps, most significantly, was the mothers’ understanding of the role of the long cane in determining public reaction to their children’s vision impairment. The mothers understood the symbolic power of the long cane and used their knowledge of past public reaction to predict, and also manipulate, future public behaviour. The level of understanding demonstrated by the mothers as well as one child, illustrates a key coping strategy used to assist with everyday experiences.

Most comparable with prior research involving individuals with progressive or degenerative vision impairment (Fourie, 2007; Hogan, 2012), was the experience of Valerie and her daughter. Receiving the long cane at a much later date than the other two children, Valerie identified similar feelings of loss and identity change, in which the long cane was a significant identifier of a “more severe disability”.

This study, while limited to the perspectives of three mothers, identifies the presence of stigma in a range of experiences which may or may not be perceived as negative. The insights gained into parental experiences also provides an understanding of what is occurring “behind the scenes” in families when a child is learning to use the long cane. Specifically, recognising the role of the long cane in altering and impacting public perception, which in turn, results in increased stigmatisation of both the child with vision impairment and his or her family. While long cane education focuses on the development of orientation and mobility skills, it is important to “think about how it feels for the family” [Valerie]. Orientation and mobility professionals must provide tools and strategies for parents to manage and “cope with” potential experiences of stigma. Strategies such as positive reactions, education and a deeper knowledge of the impairment, may assist parents in navigating the change in family circumstances as a result of vision impairment. The study’s results suggest possible reasons for public curiosity and comments conveying pity and sympathy, as due to a lack of awareness and an overarching notion that individuals with vision impairment are somehow “lesser”. These public perspectives emphasise the importance of educating both parents and the general public.

The results of the present study highlight avenues for future study, including investigating public perception of vision impairment and the underlying reasons for public reactions (and in turn stigmatisation). The study's results suggest a link between family acceptance of the long cane and the age at which it is introduced to their child with vision impairment. However, this is purely speculative in nature and further research is required.

While the generalisability of this study is limited, the results support prior studies into the complex and personalised nature of stigma and the importance of understanding the experiences of families of children with a disability. The results also suggest that the components of stigma may be present in a range of parent and child experiences, regardless of whether these experiences are perceived as negative or positive. Finally, the results identify the importance of acknowledging stigma and providing parents with strategies, skills and knowledge to deal with it.

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# **Braille Oral Reading Fluency Rates in Australian and New Zealand Students**

**Tricia D'Apice and Sue Silveira**

## **Abstract**

This research explored the braille oral reading fluency of Australian and New Zealand students with vision impairment, including braille readers and dual media users.

Standardised reading speed tests were conducted, with comparison made to grade and age-normed reading rates in sighted students. In Grades 2-6, 97% of participants' braille oral reading fluency was below their age norm, with one participant being above. In Grades 7-12, 82% of participants fell below the minimum score available to compare to their age norm, the remaining 18% were 1-4 years below their age norm.

It was concluded that assessment tools for students with vision impairment should include braille reading norms, and students must have continuous access to braille at school and for leisure reading.

**Key words:** braille, dual media, reading fluency

## **Introduction**

Oral reading fluency (ORF) is one of the five core components of reading (Dowd & Bartlett, 2017). ORF is typically assessed by an examiner noting errors made when a student reads aloud from an unfamiliar passage (Hasbrouck & Tindal 2017, p. 1). The examiner calculates the total number of words read correctly and then compares this to ORF aged norm. This assessment approach can also be applied to students with vision impairment who are braille readers, to determine their braille ORF.

Given the many challenges posed by modern literacy demands, dysfluency in braille readers is known to have a similar impact as for sighted readers (Stanfa & Johnson, 2015). Therefore it is vital that reading standards in braille readers are measured and monitored over time, for evidence of progression or otherwise (Borosan, Barker, & Li, 2017). Standardised age-normed tests exist for sighted students that make it possible to monitor

the student's reading progress. However, this is not the case for students with vision impairment. Students with vision impairment may be offered the opportunity to learn braille as a medium to access literacy, but minimal published data is currently available that can be used to compare the ORF of braille readers with sighted students (Stanfa & Johnson, 2015).

This research aimed to measure the braille ORF in a cohort of Australian and New Zealand students with vision impairment, (including braille readers and dual media [DM] readers), and then to compare the outcome to standardised age norms for sighted readers. Due to funding constraints, the research was limited to assessment of ORF rather than other components of reading such as comprehension. The research followed the tenets of the World Medical Association Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects. There are no financial interests or other potential conflicts related to this research.

## **Method**

### **Human research ethics approval**

This research was approved by the University of Newcastle Australia Human Research Ethics Committee (HREC), and by other HRECs across Australia and New Zealand. Informed consent was gained from the parents/carers of all participants.

### **Recruitment**

Local education departments and agencies distributed materials that invited braille and DM using students from Australia and New Zealand to participate in the research. Permission was sought from school principals regarding distribution of study invitations to parents and specialist teachers in vision impairment (STVIs). When the school principal consented, parents were provided with study information and asked to provide informed consent for their child to participate. STVIs were informed about the research and were invited to either attend the student research assessment themselves or arrange for an adult known to the student to be present. STVIs were also asked to secure a suitable school environment that ensured student privacy and comfort during assessment.

## **Eligibility criteria**

To participate, students had to be enrolled in a graded academic educational program (from the first year of school to grade 12) and be a braille or dual media (DM) user, with no other diagnosed learning issue. Students with a diagnosed cognitive disability were not included as modification of the study tool – the York Assessment of Reading for Comprehension, Australian Edition (YARC; Hulme et al, 2012; Stothard, Hulme, Clarke, Barmby & Snowling, 2012) was outside the parameters of this research.

## **Participants**

The parents/carers of 73 students from Australia and New Zealand ranging from kindergarten to year 12 consented to participate in the study. Sixty-four students were included in the final study as their ORF could be scored; nine students were excluded due to extensive oral reading errors which lead to failing the minimum words correct per minute (WCPM) required for rating by the study tool. All participants had the expected years of formal education, except those who were grade 12 braille readers who, for various reasons, had an average of three months less formal education than the other participants.

In the participants whose ocular diagnosis was provided, 91% had congenital eye conditions and 9% had adventitiously acquired vision impairment. The three most common diagnoses were Leber's Congenital Amaurosis in 21%, Optic Nerve Hypoplasia in 18% and Retinoblastoma in 6%. Approximately 19% of participants had some type of retinal dystrophy. The most common level of visual acuity was light perception and 8% of participants had reported visual field loss.

## **Study assessment tool – the YARC**

The YARC was chosen as the preferred study tool as at the time the study was conducted, the YARC represented the only endorsed New South Wales Board of Studies Teaching and Education Standards tool, to assess student attainment of oral reading fluency and comprehension. Further, the YARC oral reading passages were deemed suitable as

they had been developed to assess the accuracy, rate and comprehension of oral reading skills (Hulme et al. 2012, viii.).

For the purposes of the study, the YARC oral reading passages were selected according to the participant's age and grade. The Passage Reading Primary Test (Hulme et al, 2012) was used for participants up to and including grade 6; and the oral reading fluency passages within the Passage Reading Secondary Test level 1 for grades 7-9, and level 2 for grades 10-12 (Stothard et al., 2012). The length of the passage was determined by the student level, and students were asked to read the passage once. Oral reading fluency was assessed by scoring the participant's accuracy or WCPM; assessment of reading comprehension did not form part of the study.

To ensure a high-quality contracted braille, the printed version of the YARC oral reading passages (Hulme et al, 2012; Stothard et al, 2012) were scanned, optical character recognised then produced on paper, in both a single line spaced and double line spaced (to cater for the student preference). All passages were proofread by a touch reader. Each participant received a fresh copy of paper braille, (i.e., the pages were not reused).

### **Research environment**

The research environment was set up to optimise student comfort and participation. The researcher was physically present for 61 assessments. Due to remoteness from the researcher, the remaining 3 assessments were conducted by the researcher via videoconferencing, with the researcher attempting to replicate the face-to-face research environment. The remote students were accompanied by their STVI, to ensure any discomfort was alleviated, to clarify participant responses, and to trouble shoot as required. The study protocols were consistently maintained for both the face-to-face assessments and assessments via videoconferencing.

## Participant questions

Prior to beginning, the researcher confirmed the participant's verbal assent.

Participants then answered 3 questions to determine their braille reading habits, seen in Table 1; if needed, the STVI supported the student. The participant's hand movements when reading braille, (i.e., scissor, one hand or two hands), were observed and recorded by the researcher. The student's preferred learning media, (i.e., braille or DM) was also recorded.

**Table 1**

*Questions related to participant braille reading habits*

Question	Options
Curriculum Resources How do you get your curriculum / schoolwork in the classroom?	<ol style="list-style-type: none"><li>1. All Braille</li><li>2. Some paper Braille</li><li>3. No Braille</li><li>4. Electronic, listen</li><li>5. Electronic, read Braille</li><li>6. Some paper Braille, other electronic Braille</li><li>7. Some Braille, electronic listen</li></ol>
Reading for Leisure Do you read for leisure at home? If yes, do you read ...	<ol style="list-style-type: none"><li>1. Braille</li><li>2. Print</li><li>3. Audio</li><li>4. Braille preferred with some audio</li><li>5. Audio preferred with some Braille</li></ol>
How often do you read Braille for leisure?	<ol style="list-style-type: none"><li>1. Most days</li><li>2. More than one hour per week</li><li>3. Less than one hour per week</li><li>4. Never</li></ol>

## **Measurement and scoring of braille ORF**

After recording the participant's responses to the three questions in Table 1, and the nature of their hand movements, the research protocol was explained to the participant and verbal assent to participate was gained. The researcher read the YARC scripted instructions to the participant and ensured that the participant fully understood. YARC reading passages in braille were provided, and the participant was instructed to start when ready; a stopwatch was started at this time as per the YARC instructions. The researcher measured the participant's braille ORF by recording the WCPM until completed.

## **Results**

For grades 2-6, the participant's WCPM were compared to the WCPM within the grade ORF norms measured on sighted students in grades 1-6, published by Hasbrouck & Tindal (2017). These grade ORF norms include three time periods, (i.e., fall, winter and spring). The winter scores were chosen for comparison as this corresponded with the time of the year the research was conducted.

Due to the grade 6 cut-off in the Hasbrouck & Tindal (2017) grade ORF norms, and a lack of availability of sighted secondary grade ORF norms, the WCPM for participants in grades 7-12 were instead applied to the YARC formula. This formula allowed comparison with standardised age (rather than grade) norms for sighted students from a representative Australian sample (Stothard et al., 2012).

To permit analysis of ORF according to grade and braille media usage (i.e., braille or DM), participants were allocated to the groups seen in Table 2.

**Table 2***Participant groups*

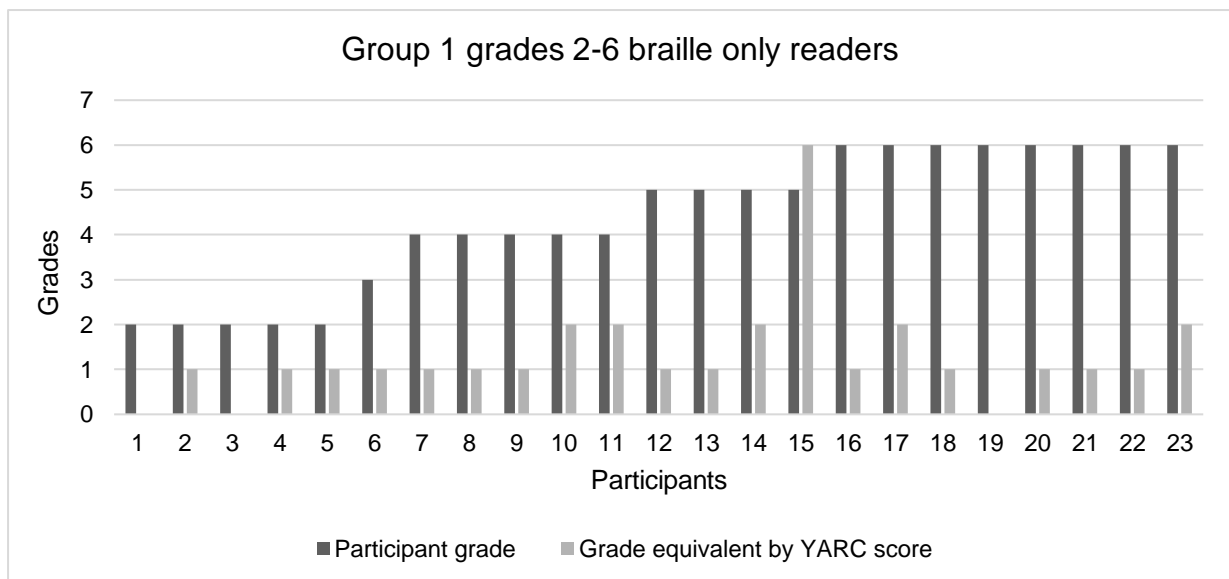
<b>Group characteristics</b>	<b>Number per group</b>
Group 1: grades 2-6 Braille only readers	23
Group 2: grades 3-6 dual media users	7
Group 3: grades 7-9 Braille only readers	14
Group 4: grades 7-9 dual media users	5
Group 5: grade 10-12 Braille only readers	15

**Braille ORF for group 1**

The braille ORF for group 1 was compared to the ORF grade norm (Hasbrouck & Tindal, 2017). Figure 1 shows the participant's grade and, based on their YARC score, the grade equivalent they achieved. One participant (participant 15) was above the ORF grade norm, however for all other participants (97%), the braille ORF was below the ORF grade norm. Generally, as the participant's grade increased, the difference between their braille ORF and ORF grade norm also increased.

**Figure 1**

*Group 1 comparison of participant braille ORF to ORF grade norm*

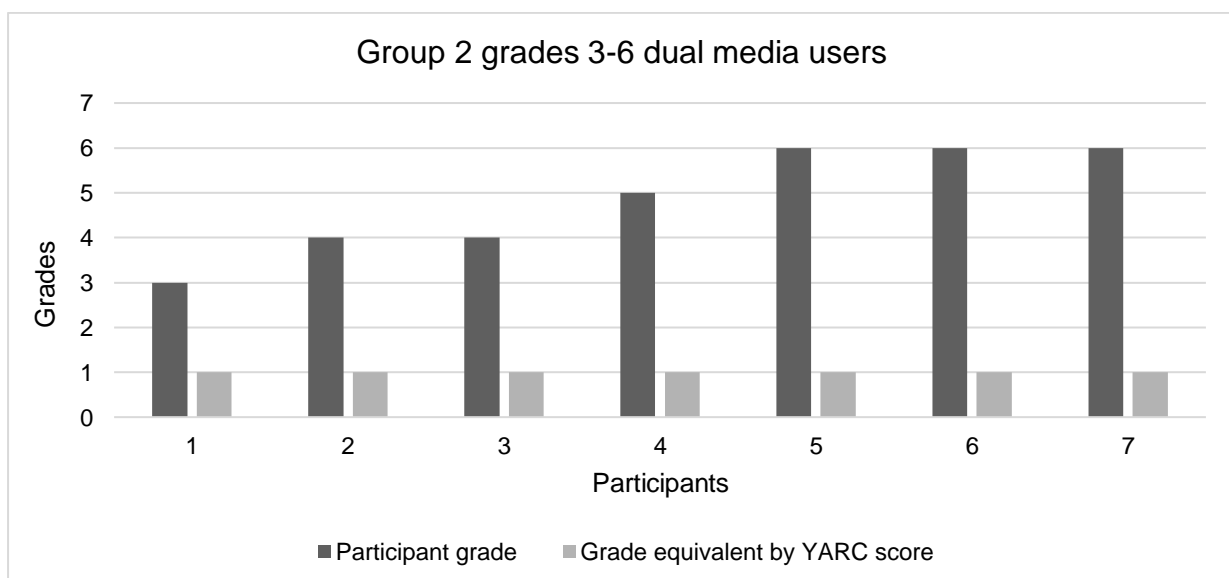


## Braille ORF for group 2

Figure 2 shows the participant's grade and, based on their YARC score, the grade equivalent they achieved. The braille ORF for all members of group 2 was below the ORF grade norm.

**Figure 2**

*Group 2 comparison of braille ORF to ORF grade norms*



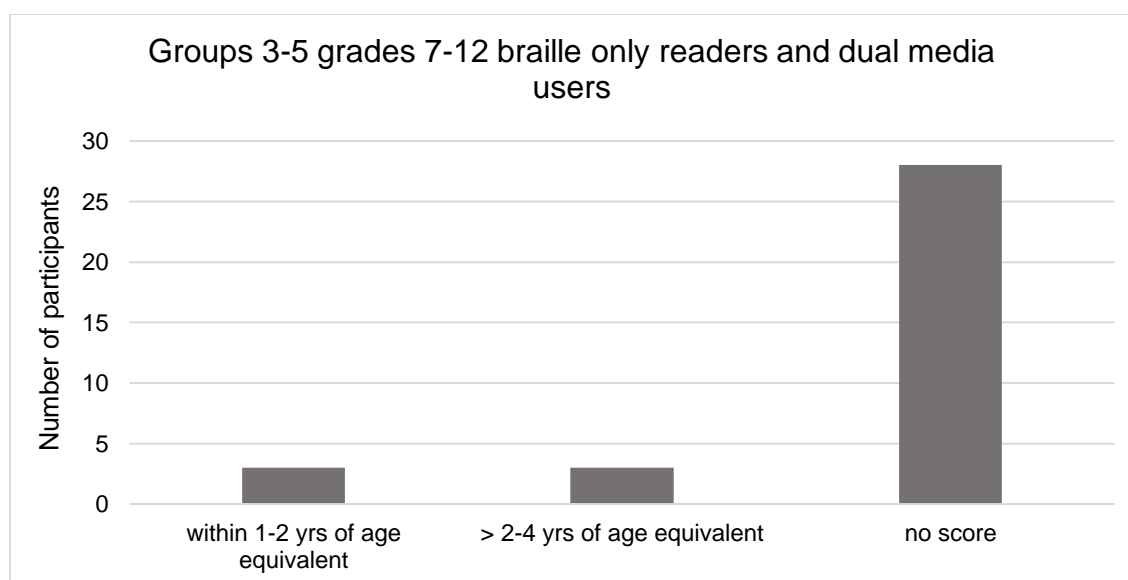


## Braille ORF for groups 3-5

No participants in groups 3-5 achieved their age equivalent in braille ORF (figure 3). Three participants were within 1-2 years of their age equivalent and a further three participants were within >2-4 years of their age equivalent. The braille ORF of the remaining 28/34 (82%) was so low that (by nature of the YARC formula), calculation of a score was not possible.

**Figure 3**

*Outcome for groups 3-5*



## Analysis of braille reading habits

### (i) Access to the curriculum in braille

Except for Group 4, all participants reported good access to curriculum resources in braille, with low reliance on audio reported (Table 3).

**Table 3**

*Summary of participant curriculum access to braille and audio*

<b>Group</b>	<b>All Braille &amp; some Braille</b>	<b>No Braille (3)</b>	<b>Audio (4)</b>
Group 1	92%	4%	4%
Group 2	57%	43%	0
Group 3	100%	0	0
Group 4	20%	80%	0
Group 5	87%	0	13%

(ii) Reading for leisure

The majority of participants in each group indicated that they read for leisure; this was lowest in Group 2 (71 %), and highest in Group 4 (100 %), both groups representing DM students (Table 4). When questioned if reading for leisure was in braille, DM participants (Groups 2 and 4) indicated the lowest rate of leisure braille reading (29 % and 40 % respectively, seen in Table 4). However, 80 % of Group 5 participants indicated that they accessed their leisure reading in braille. The frequency of reading in braille for leisure was lowest in the DM students (Group 2 at 14 % and Group 4 at 20 %). Approximately half of the students in the other groups read for leisure in braille for more than one hour per week, with the number of students who read for more than one hour being the lowest in Group 3 (50 %) and highest in Group 5 (73 %).

**Table 4***Summary of leisure reading*

	<b>Reading for Leisure</b>	<b>Reading in Braille for Leisure</b>	<b>More than 1 hour per week of Braille leisure reading</b>
Group 1	74%	65%	57%
Group 2	71%	29%	14%
Group 3	86%	43%	50%
Group 4	100%	40%	20%
Group 5	93%	80%	73%

(iii) Hand movements

Other than some Group 5 participants who used the scissor technique (47 %), all other participants used either one hand or two-hands with one hand anchored. Given the age of Group 5 participants, their hand preferences may have reflected their developmental progress.

### **Discussion**

In conducting this study several critical issues that warrant attention and action from the field of education have been highlighted. First, braille reading fluency assessment tools that are founded on age normed standards for students with vision impairment do not exist. This potentially influenced the reliability of this study's findings in that we have assessed students with vision impairment using sighted norm standards. More broadly, this lack of suitable assessment norms has created an inequity for students with vision impairment when compared to their sighted peers, and poses challenges for STVIs when assessing braille using students in an environment where high standards are expected (Wall Emerson, Holbrook & D'Andrea, 2009; Stanfa & Johnson, 2015). Despite this, STVIs are encouraged

to monitor the progress of their student's reading fluency, to ensure progression per grade and throughout the entire educational journey.

Second, the study findings were consistent with the outcome of the ABC Braille Study (Wall Emerson, Holbrook & D'Andrea, 2009), in that participants were consistently behind in their braille ORF when compared to their sighted peers, and that the gap widened as student's progress in their schooling. In the present study, only one of the 64 participants demonstrated a braille ORF above the age norm for a sighted peer. In grades 7-12 the reading rate of 82 % of participants could not be compared to their age normed sighted peers as their score was too low. The remaining 18 % demonstrated an ORF of lower than 1-4 years of their sighted peers.

Several variables were explored for potential influence on the study outcomes including the participant's formal education and their access to braille. All participants were found to have the expected years of formal education for their grade, except for Group 5 students (Grade 12 braille readers). These students reported an average of three months less formal education than the other students; a period that was unlikely to contribute to the study findings.

Developing braille literacy is heavily dependent on students having timely access to braille materials at school and at home. Other than Group 4, all participants reported good access to school-related braille curriculum resources, coupled with minimal reliance on access to the curriculum using audio. However, when reading for leisure was investigated, variation was found across the groups. The lowest level of reading for leisure was reported in the more junior grades, however the response rate was still acceptable at 74 % for Group 1 and 71 % for Group 2. Interestingly, the highest number of participants that indicated they read braille for leisure and for more than one hour per week were Group 5 students, the group with the highest literacy demand. These results reinforce the need for programs that increase student access to a wide variety of contemporary resources in braille, to ensure

students have equitable access to leisure reading materials (Wall Emerson, Holbrook & D'Andrea, 2009).

The low number of DM students (Groups 2 and 4) made it difficult to draw conclusions regarding their performance in this study. Lusk and Corn (2006) previously reported low reading rates in a group of DM students and commented that general findings from the literature reflected "...non-competitive reading rates when using nonauditory media" (p. 662). Further research into DM usage may permit comparison to key work by experts such as Lusk and Corn (2006), and Wall Emerson, Sitar, Erin, Wormsley and Herlich (2009).

This study has found general dysfluency in braille ORF in a small group of Australian and New Zealand children. The impact of this dysfluency on reading comprehension will continue to be an area for future essential research.

### **Conclusion**

This study has shown a commitment by Australian and New Zealand education providers to ensure braille reading students have good access to the curriculum in braille. We wish to congratulate our participants and their educators for what they have achieved. However, this study has also highlighted the need for greater braille leisure reading resources, to ensure students are encouraged to access braille outside of the educational environment. Further, work must begin to establish age norms for students with vision impairment, to monitor growth in their braille performance. The inequity that results from a lack of braille norms must be reversed, to ensure that braille literacy development expectations are equivalent to those of sighted students.

### **Study limitations**

Due to the range in participant age (and in some instances) inconsistencies in recall, the number of years of braille tuition, whether they had exposure to early intervention and prebraille, and whether they had first learned contracted or uncontracted braille, could not form part of the analysis. Such inclusion would have strengthened the analysis and study outcomes. The norms used for comparison with study participant results reflect the reading

performance of sighted students and as such, may have affected the reliability of the study findings.

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## **Barrier free supports for parents of a vision-impaired child during COVID-19**

**Rebekah Graham**

### **Abstract**

A blind teenager who is immunosuppressed (and thus highly vulnerable to COVID19) was confined to the space of their home prior, during, and after the nationwide lockdown in Aotearoa New Zealand (NZ). During this time of great tedium, the student expressed an interest in learning baking skills. Subsequently, their Resource Teacher Vision (RTV) prepared regular lessons that incorporated baking a variety of items. However, the cost of providing the necessary pantry items during a pandemic impacted on the family's already stretched budget. As a result of additional funding provided during the lockdown, Parents of Vision Impaired NZ (PVI) were able to send the family a supermarket voucher, which eased the additional financial pressures and ensured the teenager could continue with his lessons. This is one example of how working collaboratively from a high-trust, autonomous model - with an emphasis on meeting the point of need with as few barriers as possible - resulted in families receiving needed supports in a timely fashion.

### **Introduction**

A high-trust, person-centred, self-determining model within the NZ disability sector is slowly gaining in popularity<sup>1</sup>. Historically, reforms in the 1990's saw the implementation of punitive welfare and structural violence against those in need of help (Hodgetts et al., 2013). These reforms saw available supports consistently placed behind barriers such as needs assessments, welfare officer's opinions, job-readiness interviews, and means-testing (Hodgetts & Stolte, 2017). The shift from universal support to targeted assessment can be colloquially summarised as "only for those who really need it" and has seen increasing numbers of disabled people and their families denied access to the very funding designed to provide assistance (Bush, 2017; Hodgetts et al., 2013). Additionally, eligibility criteria can be

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<sup>1</sup>See, for example, the Enabling Good Lives demonstration: <https://www.enablinggoodlives.co.nz/>



misaligned to the supports parents of a disabled child require (Martin, 2020). Subsequently, families with a disabled family member can feel reluctant to ask for aid, unsure if they qualify for needed relief, and averse to engage with the welfare office due to past demeaning treatment (Neuwelt-Kearns et al., 2020; Welfare Expert Advisory Group, 2019).

The low-trust model associated with the provision of punitive welfare support creates an administrative burden for families (Hodgetts & Stolte, 2017). Examples of this include having to provide yearly specialist reports to confirm that their child is still vision-impaired, extensive paperwork and tracking of receipts for additional costs, and performing precise calculations for a family's income. If such calculations are incorrect, the family incurs a 'debt' with the welfare office that must be repaid (Families Commission, 2009). The compounding effect of these interactions and barriers can leave parents of a disabled child, including those with a vision impairment, without the necessary financial supports (Murray, 2019), unsure about receiving funding, and overwhelmed by the sheer amount of bureaucratic work required for what can be an infinitesimal amount of cash (Martin, 2020). Undoing the impact of these "reforms" and imposition of restrictions is taking some time.

### **COVID-19 Support Needs**

The central NZ government's immediate response to increased need for support during the COVID-19 pandemic and subsequent restrictions was a significant shift from the aforementioned punitive and low-trust model. The Ministry of Social Development created the Community Awareness and Preparedness Grant Fund (<https://www.msd.govt.nz/about-msd-and-our-work/newsroom/2020/COVID-19/community-awareness-and-preparedness-grant-fund.html>), which was made available to community groups providing essential community-led solutions that supported local resilience and community wellbeing during COVID-19 restrictions. Community groups could quickly and clearly apply for grants of up to NZ\$5,000 that would enable support for their communities and assist people through any challenges faced. Our organisation, PVI, applied for and received this funding. In distributing

received funds, PVI intentionally centred parent's autonomy and deliberately made the process as barrier-free as possible.

### **Using funding to assist families**

Conversations with parents via social media and email had identified the following as additional needs during the COVID-19 restrictions:

- Being able to purchase appropriate apps for a vision-impaired child and/or their sibling to use on their devices, including apps specifically designed for low vision students and not included in current service delivery options.
- Provision of supermarket vouchers.
- Support to purchase online subscriptions for streaming services.
- Support to purchase audio books for a vision-impaired child.
- Provision of extra data for mobile and/or internet due to increased use of data/internet during lockdown.

These identified needs were clearly outlined in our funding application, along with specific anonymised vignettes of individual families. Vignettes highlighted the need to support the family as a whole unit, not just the needs of the vision-impaired child, and the wide variety of articulated needs.

Interactions to distribute the funding to parents occurred across several platforms: direct messaging, Facebook groups, email, telephone, and via RTVs. This was intentional in order to create a process that was as barrier-free as possible for parents. During the COVID-19 restrictions, RTV's were deemed an essential service and were allowed to visit families in-person. As such at this time, RTV's were crucial in providing face-to-face contact for parents without regular internet access. Where RTV's identified a need we were able to work together to find ways of meeting this need within the funding brief and to provide support promptly in accessible and useful ways. This typically took the form of a purchased voucher (for example, iTunes for app purchases or a supermarket voucher for baking items), which was sent directly to the parent so that they could utilize it from the domestic space of their

home. Utilizing a high-trust model removed barriers and alleviated the stress burden carried by parents during a very stressful time. Interestingly, while not explicitly required, parents were exceedingly diligent in providing receipts and images of purchased items and their child(ren) utilizing them.

Similarly, in providing support we utilized multiple options according to parent's expressed preferences and needs, from reimbursing printing costs directly to bank accounts to purchasing items on behalf to mailing out supermarket vouchers. Rather than insist on a specific form being completed in a particular way we simply worked with parents to identify their current need and how we could best meet it at this time. Altogether, we were able to provide support for fifty families. Needs varied from purchasing applications for their child(ren) to use during lockdown to stands/holders for iPads to printer ink and paper to stationery items for arts and crafts to grocery vouchers for food. Common to all families was a vision-impaired person and additional costs associated with the COVID19 restrictions. Being able to provide practical assistance in dignifying ways left parents feeling supported. Likewise, centring parents' needs throughout restored a sense of control and self-determination at what was an exceedingly difficult time.

The pressure placed on parents of a vision-impaired person to have to constantly advocate and ask (often in the face of disinterested others) cannot be underestimated. One family noted an accessibility gap for learning at home during lockdown. Specifically, a need for high contrast black on white materials which could be enlarged to suit the needs of their low vision child. As a result of receiving funding, PVI was able to assist this family to find suitable materials from a store that was (a) open during Level 4 lockdown restrictions and (b) able to deliver to their home address during said restrictions. The seamless and parent-centred nature of our interactions resulted in this comment from a parent: *"I just burst out crying - good crying! Nothing is ever this straight forward...it was suddenly evident how hard it's been!"* For parents such as this, the feeling of being heard was as valuable as the

provision of practical support. Simply knowing that there were not alone or forgotten about did wonders for their mental health and emotional load.

Parents of a vision-impaired person are typically managing multiple interactions across organizations and agencies. It is not uncommon for parents to navigate assorted subsidiaries of the Ministry of Health, the Ministry of Education, and the Ministry of Social Development in order to access some of the support their child needs. The process to access this support is typically time and energy consuming, contains various barriers and hoops, and does not always result in the needed support eventuating. As the PVI parent experience during the COVID19 restrictions shows, supporting families means initiatives that are easily accessible, allow for flexibility and self-determination, and which have multiple entry points.

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**SPEVI Community of Practice: Creating a domain to collaborate, share practice, ideas,  
and resources for SPEVI members during the COVID-19 pandemic**

**Melissa Fanshawe**

**Abstract**

The SPEVI Community of Practice was created as a response to a call from keynote speaker Professor Mike McLinden at the SPEVI conference in January 2020 and the rapid move to online learning during the COVID-19 pandemic. This article outlines the response of the South Pacific Educators of Vision Impairment (SPEVI) to providing a domain, community and practice through an online Community of Practice to support specialist during this time. We wish to continue Communities of Practice to incorporate the priorities and pressing needs of SPEVI members, and to serve as a community to discuss issues surrounding the education of students who are blind or vision impaired.

**Introduction**

During the 2020 South Pacific Educators of Vision Impairment (SPEVI) conference in Adelaide, Australia (<https://www.spevi.net/conference/papers-2020-conference/>), keynote speaker Professor Mike McLinden, called on SPEVI members to establish Communities of Practice to develop shared knowledge, resources and understanding. His call was based on research of the usefulness of Communities of Practice as a way for practitioners to engage in professional development collectively, which ultimately benefits the groups they work with (Lintern, 2018; Wenger-Trayner, 2014).

Soon after this call, the COVID-19 pandemic hit and teachers within schools throughout the world rapidly adjusted to provide viable learning opportunities for students. Within Australia and New Zealand, at least for a time, the majority of the students were taught through school-led remote learning services, usually provided through online platforms. Many schools “scrambled to prepare materials that can be accessed from outside the classroom” (Sacks et al., 2020). Some students and/or schools did not have the

resources to facilitate online learning, in which case alternative learning opportunities were provided (Reimers et al., 2020), through offline materials, or in the case of “vulnerable” students, by attending school facilities (Australian Government, 2020). The focus of learning during this time “shifted to parents and families to support home-based learning for their children” (World Bank, 2020, p. 38).

Throughout the rapid process of designing and implementing alternative schooling, equity and accessibility were not always considered (Ro'fah et al., 2020). For students with vision impairment or blindness “pictures, diagrams and videos” were also difficult to access (Latham, 2020, para. 5) and many students did “not have access to supports such as on-site braille transcribing, assistive technology, or support” (Illinois State Board of Education, 2020, p 3). Specialist Teachers (Vision Impairment) hurried to support their students who were being educated through many different schools to ensure they were able to access the curriculum. This paper discusses the Community of Practice initiated by SPEVI for Australian and New Zealand educators during the COVID-19 pandemic and the ongoing usefulness to support SPEVI members.

### **Literature Review**

The concept of Communities of Practice was initially introduced by Lave and Wenger (1991) and further developed by Wenger (1998) to define “learning that happens among practitioners in a social environment” (Li et al., 2009, p.11). Communities of Practice has taken various forms over time, initially as an apprenticeship type model, whereby those who were novice in an area, would learn from the experts in the community (McDonald & Cater-Steel, 2017). However, it was recognised that those with experience in the area also benefitted from the ability to share information and meaningful learning within a social context (Cater-Steel, et.al., 2017). Currently the defining attribute of Communities of Practice is that gaining knowledge centres on social process, rather than formal instruction (King & Cattlin, 2016). This aligns with theories suggested by Vygotsky (1978) who raised the

importance of social relationships to stimulate higher-level thinking and application of learning in practice.

The emerging prevalence of Communities of Practice in education and health care fields (King & Cattlin, 2016) is explained by Wenger's (1998) observation that inherent in a Communities of Practice will be a group of people who are "motivated by goals that matter not just to members of the community but to others as well" (Miles et.al., 2019, p. 10). This intention to help others was explicated by Palermo (2016) who found that Communities of Practice "provide a potential mechanism to support learning through experience and the development of new ideas and improved practice... by concentrating on the needs of participants and promoting reflective practice" (p.20).

For people who are working in their jobs independently, work with a niche group of people or are physically isolated (Pharo et al, 2014), Communities of Practice have been found to be beneficial for practitioners to "connect with others with similar interests, share experiences and learn from each other" (King & Cattlin, 2016, p.38). Communities of Practice are believed to help individuals to develop a professional identity within their field, based on the shared understandings of best practice (Li et al., 2009). Through sharing of experience, often highly personal, other members can identify practices that may also work in their own situations. Debowski (2014) also believes that a facilitator is required to focus discussions and to be effective should "reflect member expectations and responsive to changing needs" (p.3).

According to Wenger (2000), Communities of Practice are cultivated when they consist of the following three following three elements:

- The domain: An identity from a shared interest
- The community: Members interact to share ideas and experiences
- The practice: Develop shared resources and understanding



King and Cattlin (2016) identifies that a Community of Practice is different from a network, as “learning is at the core of this community; learning how to deal with difficult challenges, learning to adapt to new teaching practices and technologies, learning where and how to find the information and contacts that can help” (p.31). Communities of Practice strengthen over time as “tacit aspects of knowledge are often the most valuable and sharing requires extensive personal contact and trust, and the interaction and informal learning as experienced in Communities of Practice” (Cater-Steel et al., 2017, p. 8).

Communities of Practice can be created naturally or be formed intentionally (King & Cattlin, 2016) and have been identified as useful during disaster recovery to enable professionals to come together and function effectively in time of crisis (Miles et al., 2019). This domain enables the quick establishment of mutual resources, terminology, strategies and ideas to address training needs, as evidenced through the many organisations who established Communities of Practice during COVID-19. For example, NSW Health established over thirty multidisciplinary Communities of Practice during COVID to “support clinicians to network and share strategies, identify, prioritise and escalate issues and solutions... review and provide expert clinical advice... and share advice” (NSW Health, 2020).

## **Methods**

In March 2020, COVID-19 lockdowns were imposed across Australia and New Zealand, prompting the SPEVI Committee of Management (COM) to initiate the first Community of Practice in order to support SPEVI members during the transition to online learning. Emails were sent to SPEVI members from the SPEVI Secretary inviting them to the first Community of Practice on 2<sup>nd</sup> April. As SPEVI members consist of teachers, Specialist Teachers (Vision Impairment), Orientation and Mobility specialists, therapists and parents, the invitation encouraged all to join to discuss creating the best learning experiences for their students who are possibly working in a home situation during Term 2. The meeting consisted of a facilitated Zoom session, asking SPEVI members (i) what they

were doing to support students in their states, (ii) how students were coping, and (iii) how they were keeping in contact with students and families. Approximately 20 participants joined the meeting.

At the end of the meeting, participants unanimously voted for another meeting. Topics were discussed, with the most pressing being a request for what to do when schoolwork was inaccessible to students with vision impairments. A second meeting was facilitated via the Zoom platform in May (<https://zoom.us>). In this Community of Practice, three questions were asked. For each question members went into smaller 'breakout rooms' (Zoom Video Communications Inc., 2020) as they discussed (i) opportunities, (ii) challenges they had faced and (iii) workarounds to problems that had arisen from online learning. After each question, the group responses were then shared with all participants, to facilitate conversation as a whole community.

All participants indicated a further meeting would be beneficial, with a number requesting information on the development of online learning for students who are blind or low vision. The third Community of Practice in June was titled 'Back to Business: Building online learning into our pedagogy', with invited speaker Tricia d'Apice, from RIDBC Teleschool (Royal Institute for Deaf and Blind Children (RIDBC), n.d.) explaining how teleschool has been successfully delivering content online. Discussion facilitated through Zoom and breakout rooms centred around how knowledge from online pedagogy could work for students who were blind or low vision going forward.

In mid-2020, many schools returned to face-to-face learning, and the Community of Practice group decided that a fourth meeting be held on 4th August. The topic of agency for students had been suggested by the facilitator at the third meeting and an international guest presenter, Graeme Douglas, Professor of Disability and Special Educational Needs in the School of Education, University of Birmingham, was invited to speak. At the conclusion of the talk, participants again utilised Zoom breakout rooms to discuss one de-identified case and practices that they engaged to promote agency for our students.

Following this meeting, it was decided that the Communities of Practice should continue in an ongoing manner in 2021. The group believed that four meetings a year would be sustainable. A survey monkey form was then created to gather information for future Communities of Practice, to be shared at the SPEVI conference in January 2021.

The Survey asks the following four questions:

- (i) If you have been attending a SPEVI Community of Practice what have you valued?
- (ii) We would like to hold a Community of Practice each term. What days and times suit you best to be involved in an online Zoom meeting?
- (iii) What would you like to experience at the next Community of Practice?
  - a. Guest speakers
  - b. Discuss de-identified case studies
  - c. Professional development on new tools or technology
  - d. Other (please specify)
- (iv) Optional: Please feel free to add any topics you would like to explore.

## **Findings**

### **Community of Practice 1**

The first meeting was focused on establishing a Community of Practice with members introduced and experiences during COVID-19 being shared. It was established that there is considerable variation in how schools provide online learning. Specialist teachers therefore need to be aware of how services are being provided for each school of students in their caseload and may need to have knowledge of a number of different platforms to deliver support to their students.

Specialist teachers also reported that some parents were feeling overwhelmed. They had their own work, loss of job and/or other children to manage, as well as trying to support learning at home. To ensure families could feel that learning at home was manageable,

specialist teachers felt that providing small amounts of information, for example one or two relevant websites, was more useful than providing all information at once. The mental health of students and their families was very much the focus of members during this time (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 4). A document listing useful sites for accessible online learning at home was also provided for members to contribute to, on the SPEVI website (<https://www.spevi.net/community-of-practice/>).

## **Community of Practice 2**

In the second Community of Practice, the opportunities that have arisen from online learning were discussed (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 5). Participants went into breakout rooms and shared the following, grouped here by themes.

### **Opportunities**

#### **Professional Development**

- Accessibility: Classroom teachers asking how to ensure accessibility of content.
- Explanation: Classroom teachers using explicit wording and simplifying instructions to all students, which benefitted students with vision impairments.
- Technology: Classroom teachers and parents seeing value in students' technology and feeling less 'uncomfortable' with it.

#### **Curriculum Driven**

- Adaptability: Classroom teachers understanding how to easily modify content, for example, online music lessons.
- Opportunities to move forward in a more inclusive way – with blended learning or 'what can I use to make that work?'.

#### **Student focused**

- Some students happy with online learning.
- Student led – many new experiences have been taken on and some students are actively looking at how they can learn new technology (for example, one student

discovered the joy of email to keep in contact with friends, which may not have happened otherwise).

- Independence for students in their learning.
- Learning workarounds to problems in technology.
- Students were able to be more flexible with time.
- Learning skills to socialise in online environment was being explicitly taught to ALL students, which was helpful for students who are blind or have low vision.
- Caution that online learning does not isolate students socially.

### Family

- Family observe how technology assists and how they can support this process.
- Families taking more notice in what has to be done.
- Families who have been shy working through the school may have more opportunity to interact with specialist teachers.

Participants then went into different breakout rooms and discussed the challenges of being online and what workarounds have been used or could be used to aid inclusion of students with vision impairment in online learning.

**Table 1**

*Challenges and workarounds*

Challenges	Workarounds
<b>Accessibility</b>	
It was noted that a learning platform could be accessible, but there could still be inaccessible elements – for example, Zoom can't see what is shared on screen.	<ul style="list-style-type: none"> <li>• Verbalising what is on the screen as best practice.</li> <li>• Sending the PowerPoint to all recipients.</li> </ul>



Challenges	Workarounds
	<ul style="list-style-type: none"> <li>This was also discussed in relation to learning new tools for Specialist teachers, such as Zoom meetings for proof-readers and in communities of practice.</li> </ul>
<b>Pressure</b>	
Students under pressure to work independently.	<ul style="list-style-type: none"> <li>Strategies and routines for school.</li> <li>Pathways for asking for help, for example, classroom teacher, Specialist teacher, parent.</li> <li>Relaxation, mindfulness.</li> <li>Adaptive technology support.</li> </ul>
Families overwhelmed	<ul style="list-style-type: none"> <li>Offer support and let them know you are available if required.</li> <li>Additional NDIS support.</li> </ul>
<b>Social Skills</b>	
Many students with vision impairments have social skill goals included in IEPs. There was concern that they are not having this and/or concerns for when students go back to school and need to interact.	<ul style="list-style-type: none"> <li>Some groups reported increased conversations between their clients – for example, a music group.</li> <li>Explicit conversations around expectations in classroom as opposed to home.</li> </ul>

### Community of Practice 3

Tricia d'Apice, Lead Consultant: Vision Impairment, Remote Services, spoke about the online learning that they have been doing for a number of years at RIDBC, including support for students using braille, dual media users, and students with multiple disabilities. She talked about the importance of goals and resources for students, as well as developing relationships. Feedback from some of her braille readers indicated some found online learning manageable due access to materials and the pace being more flexible (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 7).

Technology usage going forward in learning was also discussed. A number of tools have been used, including but not limited to:

- Zoom (<https://zoom.us>),
- Skype for business (<https://www.microsoft.com/en-au/microsoft-365/skype-for-business/download-app>),
- Microsoft Teams (<https://www.microsoft.com/en-au/microsoft-365/microsoft-teams/group-chat-software>),
- Google classroom ([https://edu.google.com/intl/en\\_au/products/classroom/](https://edu.google.com/intl/en_au/products/classroom/)),
- One Note (<https://www.microsoft.com/en-au/microsoft-365/onenote/digital-note-taking-app?ms.url=onenotecom&rtc=1>),
- Blackboard Collaborate (<https://www.blackboard.com/en-eu/teaching-learning/collaboration-web-conferencing/blackboard-collaborate>),
- Education Perfect (<https://www.educationperfect.com>),
- Webex (<https://www.webex.com>),
- Class Dojo (<https://www.classdojo.com/en-gb/?redirect=true>),
- Canvas (<https://www.instructure.com/canvas/en-au>), and
- Storypark (<https://au.storypark.com>).



Many of these tools are accessible, but some have certain elements which are inaccessible (for example, screen share on Zoom). Accessibility may also depend on how teachers embed the documents within the platform. It was noted that those who took time to teach the platform had greater student success in using them (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 7).

Understanding each tool and how to use it was incredibly important. For example, when using Zoom, this might include HOW to mute and WHEN is appropriate to mute. This explicit instruction was deemed essential, as well as knowledge of assistive technology specifically designed for students who are blind such as Voice Over (<https://www.apple.com/au/accessibility/vision/>) or braille devices. It was also noted that classroom teachers were understanding the importance of differentiating for students with vision impairment and had been actively trying to ensure access.

The final discussion was on the importance of relationships. Participants mentioned:

- Classroom teachers: an increase in communication and team teaching for students who are blind or have low vision.
- Colleagues: an increase in collaborations as communities of practice developed across Australian states.
- Families: new relationships were developed with families as partners.
- Students: a focus on competency and autonomy and developing workarounds for difficulties.

In conclusion, it was agreed that the knowledge of new tools for online learning would have a positive impact on previous geographical barriers that may have impacted learning previously. The flexibility of time that online learning had afforded students with vision impairment was also acknowledged (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 7).

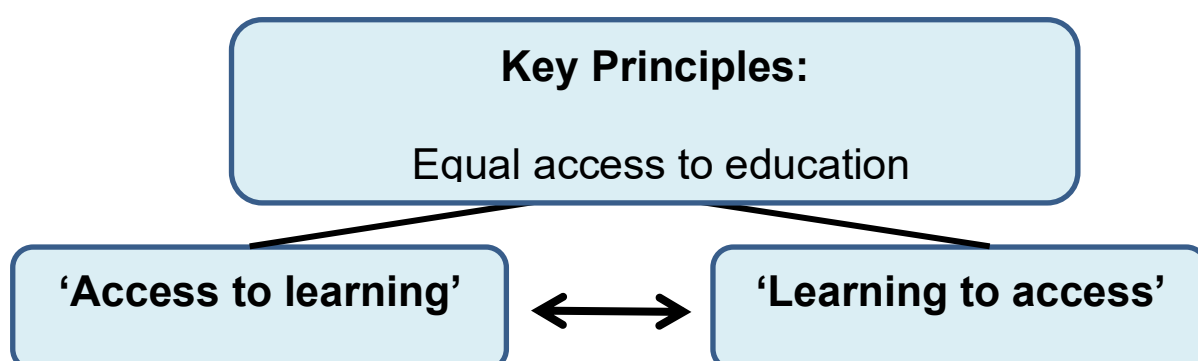
### **Community of Practice 4**

Professor Graeme Douglas spoke in the fourth Community of Practice (South Pacific Educators in Vision Impairment (SPEVI), n.d., para. 8) about the purpose of vision impairment education, whether it be ‘advocating for fair access’ or ‘teaching of access skills’. Douglas suggested teachers of students with vision impairment “may take one of three positions: ‘*teacher of skills*’ or ‘*provider of access*’” or a more ‘*flexible*’ approach depending on the student’s needs, access to technology, school structures and goals. In ‘*teacher of skills*’, the teacher is spending most of their time making students, peers, and staff aware of adjustments to access learning, whereas the ‘*provider of access*’ is intent on teaching students the knowledge and skills to be independent in accessing their own materials (G. Douglas, personal communication. August 4, 2020). This also encompasses domains within the Expanded Core Curriculum (Hatlen, 1996) such as mobility, technology self-determination and social skills.

Douglas explained that the more flexible approach enables teachers to provide modifications and adjustments to learning when required, whilst also teaching them stage appropriate knowledge and skills to develop personal agency in accessing the curriculum. This is described in Figure 1 with the key principles being equal access to education and developing personal agency, which is achieved by an interaction of ‘access to learning’ and ‘learning to access’ (McLinden & Douglas, 2020, p. 19).

**Figure 1.**

*Vision impairment education: A dual model of access*



(McLinden & Douglas, 2020, p.19. Reprinted with permission.)

Participants again used breakout groups to examine their own practice. Participants were asked to think of a student they work with, how accessibility was provided, and what skills were taught to create independence for the student. Coming back together, the group discussed balancing ‘access to learning’ and ‘learning to access’ (McLinden et al., 2016) within schools, primarily discussing the stage of the student and the systems within the schools. As a conclusion, Douglas (2020) explained “professionals should frame their actions and decisions around what matters, draw upon evidence-based practice when it exists, and gather their own evidence when needed [as a] Researcher-practitioner” (G. Douglas, personal communication. August 4, 2020). He spoke to the importance of Communities of Practice in developing this evidenced based practice within the field.

### **Discussion**

The establishment of a Community of Practice for SPEVI members was implemented to incorporate the priorities and pressing needs of SPEVI member during the COVID-19 pandemic, and to serve as an ongoing community to discuss issues surrounding the education of students who are blind or vision impaired. Community of Practice addresses the following aims of SPEVI:

“Aim 2.1: To be recognised as the professional body of educators whose specialty is in matters pertaining to the education of persons with vision impairment in Australia, New Zealand, and Pacific Island Countries.

Aim 2.3: To encourage the highest standards in the educators of persons with vision impairment by promoting research and professional training for general and specialist teachers.

Aim 2.4: To promote and facilitate the interchange of information and collaboration among educators, professionals, parent groups and the broader community concerning education and equal opportunity for persons with vision impairment.

Aim 2.5: To encourage the use of appropriate mainstream and assistive technologies, resources and optical and non-optical aids, in the education of persons with vision impairment, and to promote teacher education programs in the use and care of existing and new techniques and technology” (SPEVI, 2016, p. 4-5).

The success of this Community of Practice was having access to a platform (Zoom) with which the facilitator was already fluent in using for online learning. Particularly in the first few Communities of Practice, this helped participants to feel comfortable and able to engage in conversations in the online Zoom environment. Asking participants what they wanted to discuss in the next meetings, as well as having access to expert speakers developed ownership and provided professional development and professional conversations within the Community of Practice. During lockdown, meeting times were agreed on through group consensus, but it is expected that in the future, four dates will be pre-planned for the year ahead.

Measuring the effectiveness of Communities of Practice are challenging (Palermo, 2016), given their role is to create a place where people can come to connect and share knowledge with other people with similar interests. For SPEVI it is hoped that the

Community of Practice will run beyond the pandemic, to be a regular domain for our members to:

- Support “resilient, inclusive teachers” (World Bank, 2020, p. 11) through contact with colleagues to “validate their roles” (King and Cattlin, 2016, p. 44).
- Ask practice questions, share expertise, experiences and resources, information, (Wenger, 2000) including learning about innovations by including topics addressing technology for students with vision impairment.
- Provide professional development opportunities accredited through New South Wales Education Authority (NESA)/or other accreditation (if required) for members’ attendance at Community of Practice sessions.

The SPEVI Community of Practice hopes to grow stronger in 2021. Content and timings will be based on the survey monkey responses which will be circulated to gain insight as to what members would like included. If you would like to be involved in our ongoing Community of Practice, please see the SPEVI website <https://www.spevi.net/community-of-practice/> or contact [spevisecretary@gmail.com](mailto:spevisecretary@gmail.com).

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## **Report: Driving and vision**

**Sue Silveira & Pranitha Moodley**

Driving is a complex skill. It requires high level abilities in recognition and reaction to potential hazards to ensure expert on-road handling of a vehicle, and the application of road rules. The visual environment in which driving occurs in, is dynamic, fluctuating, and often visually cluttered. Complex coordination of central and peripheral vision with other visual components such as spatial resolution, contrast sensitivity and light sensitivity must occur for efficient visual capacity (Owsley, 2010). To ensure the safety of the driver and those around the driver, split second decisions must often be made. This involves coordination of all senses including vision with cognition, to ensure awareness and reasoning that leads to adequate safety margins.

While many factors contribute to on-road safety, driver health and fitness to drive is an important consideration. Drivers must meet certain medical standards to ensure their health status does not unduly increase their accident risk. Assessing Fitness to Drive, a joint publication of Austroads and the National Transport Commission, details the medical standards for driver licensing, and is used by health professionals and driver licensing authorities. The standards are approved by Australian commonwealth, state and territory transport ministers, and can be found at: <https://austroads.com.au/drivers-and-vehicles/assessing-fitness-to-drive>

The Australian driving vision standards are comprehensive and include mandatory reporting on visual acuity and visual fields. The presence of certain ocular conditions is also considered such as monocularity (use of one eye only); diplopia (double vision); the presence of a progressive eye condition; and congenital and acquired nystagmus. Decisions regarding licencing are made in consideration of the person, the presence of concurrent ocular and health conditions, and the potential impact on driving performance. People wishing to seek licencing must be aware of the following:

1. In all states and territories, legislation requires a driver to advise their driver licensing authority of any long-term or permanent injury or illness that may affect their safe driving ability.
2. At licence application and renewal, drivers can be asked to complete a declaration regarding their health, including whether they have any long-term conditions. The driver licensing authority may request a medical examination to confirm a driver's fitness to hold a driver licence.
3. Drivers may be liable at common law if they continue to drive knowing that they have a condition that is likely to adversely affect safe driving. Drivers should be aware that there may be long-term financial, insurance and legal consequences where there is failure to report an impairment to their driver licensing authority (Austroads, 2017).

Students with vision impairment are often keen to explore their options for driving. However, vision impairment is known to impact on safe driving, so for these students, holding a driver's licence is unlikely (Owsley, Wood & McGwin, 2015). Studies have identified the impact of reduced visual acuity and visual fields, and also the association between vision impairment and motor vehicle accidents (Yazdan-Ashoori & ten Hove, 2010). Therefore, it is vital that students and their families discuss the issue of driving with the student's ophthalmologist, as early as possible. Depending on the student's visual and health status, options may exist such as access to driver rehabilitation programs that support the learner driver. It is also vital to support those students prohibited from applying for a licence due to their visual acuity and/or visual fields standards and/or presence of concurrent health conditions. These students need to be informed early and continue to be supported as their peers begin on the journey of gaining a licence to drive.

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## **Report: International Council for Education of People with Visual Impairment**

**Frances Gentle and Ben Clare**

The International Council for Education of People with Visual Impairment (ICEVI) is a global organisation that shares with SPEVI the goal of promoting equitable access to quality education for children and young people who are blind, have low vision, deafblindness or additional disabilities. This report presents an overview of ICEVI's global and Pacific activities during 2020.

On behalf of ICEVI, we extend our appreciation to SPEVI members and colleagues for your support and collaboration during 2020. It has been a challenging year, with the COVID-19 pandemic impacting upon the lives of loved ones, colleagues and the individuals and families we support. The pandemic has disrupted government, civil society and education sector services and programs around the world. In many countries, school and business closures have led to the loss of family livelihoods and a shift to either home schooling or no schooling for many children.

### **ICEVI Global initiatives**

At the global level, ICEVI has transitioned from in-person events and project activities to online communication platforms. This transition has enabled us to maintain our connections with United Nations agencies, the global education community, international and national partner organisations, and educators and local communities. One significant change that will interest the SPEVI community, is the transition from an in-person World Blindness Summit in Madrid, Spain, to a fully online event which will take place on 28-30 June 2021. The Summit is hosted by ICEVI partner member, ONCE, the National Organisation of Spanish Blind People, and will bring together delegates from ICEVI and the World Blind Union. The online nature of the Summit will enable people from across the Pacific and other regions to

register as delegates. For information about the Summit, please visit [the World Blindness Summit website](#).

During 2020, ICEVI released an open access resource entitled “Include Me” for families and community workers supporting children with multiple disabilities and/or deafblindness. The publication addresses the question “Where do I begin?” and is available for download in more than 20 world languages on the [ICEVI website](#). An ICEVI working group has commenced development of a companion publication that introduces braille for children with multiple disabilities and/or deafblindness. This publication is scheduled for release during the World Blindness Summit in June 2021. Also for release during the Summit is an open-source book that describes the substantive impact created by The Nippon Foundation on the lives of persons with vision impairment in the East Asia Region. This book is a joint initiative of ICEVI and the Overbrook Nippon Network on Educational Technology (ON-NET) and will include an extensive array of case study videos.

The global disruption to educational systems due to the COVID-19 pandemic has resulted in increased use of ICEVI’s “Math Made Easy” instructional videos on teaching mathematics to children with vision impairments. There are not more than 175 YouTube videos and the website has now over 1500 individual and organisational subscribers. Recent data provided by Google indicates that viewership has risen to over 120,000 during 2020. The [ICEVI Math Made Easy website](#) includes a video playlist that arranges the videos according to mathematical concepts. Another valuable resource supporting teachers in low- and middle-income countries is the [Teacher Training Curriculum](#), developed by Prof Kay Ferrell and an ICEVI task group. This Curriculum is designed to jumpstart training in those

countries that have not yet developed the educational infrastructure or adopted standards to prepare teachers of students with visual impairments.

The ICEVI Regional Committees and our partner organisations have responded creatively to the physical restrictions caused by the pandemic. The ICEVI Regional Committees and partner organisations have developed COVID-19 guidelines for persons with vision impairment; delivered webinars for government leaders, educators and parents; and increased their online information sharing and collaboration using the global and regional ICEVI websites and social media.

### **Pacific Region**

This report briefly details events that have occurred in the ICEVI Pacific region, focusing on current issues and where ICEVI has played a role in addressing them.

In February, Ben Clare travelled to Fiji as part of work to strengthen ICEVI's ongoing partnership with local advocacy and service providers, including the Pacific Disability Forum and the Fiji Society for the Blind. Activities undertaken included an intensive Braille maintenance course. This was the second such course held in the Pacific region and was supported by Perkins Solutions and the Aspen Medical Foundation. The course was highly successful with over 30 machines repaired and put back into service, directly supporting the Fiji Society for the Blind's outreach school support program, the Ministry of Health's community-based rehabilitation program, and the University of the South Pacific's disability resource centre. Other activities in Fiji included exploration of options to upskill orientation and mobility professionals, initially in Fiji and then regionally, and collaboration with the Pacific Disability Forum and WIPO to host a seminar on the Marrakesh Treaty, originally scheduled for mid-2020 and currently on hold due to the COVID-19 pandemic.

Many of the activities scheduled to take place in Kiribati, Fiji and Papua New Guinea during 2020 were cancelled due to the pandemic and the restrictions that accompanied it. However, online options enabled continued liaison with the region to some extent the carrying out of some meaningful activities, including working closely with the Kiribati Institute of Technology which has enrolled students with disability during the past two years. Ben was tasked with designing several of the college's courses including English, ICT, hospitality and carpentry with disability inclusion at the outset, enabling all courses to be completed by both people with disability and otherwise, all without having to change any part of the curriculum. To date, I have completed the English and hospitality courses, both of which have gone into service and are being studied by people with disability and the general student population. Remaining courses will be designed in the New Year.

#### **Direct financial assistance**

As the coronavirus pandemic swept across the world, the Pacific region felt the full impact of restrictions and swift economic downturn. While the number of actual virus cases remains low at the time of writing, the effects of the pandemic are just as real here as they are in the rest of the world. From 13 March 2020 and for several months afterward, schools were shut, and limited or no opportunities for continued learning were made available. Students with disability were swiftly sent home to villages, teachers were laid off, and essential disability support services, including education, suffered devastating budget cuts. This scenario played out across the region and although schools and some services have restarted in some countries, the budget cuts remain, meaning more children are missing out on educational services. This is a marked reversal on improvements made in recent years. Online learning has not been widely practised within the region, except for



Australia and New Zealand which hurriedly adopted online learning as the pandemic was declared but largely discontinued or scaled back as virus cases decreased. The exception was the state of Victoria, which persisted with online learning for several months longer due to a major outbreak of the virus.

In New Zealand, a television channel was established by the Ministry of Education as an alternative to online learning. In Fiji, a major problem with accessibility arose when the Fiji Society for the Blind, the only means of braille production for most of the vision education sector in the country closed down and educational materials being emailed to students by their teachers were not accessible for reading. This situation has been somewhat addressed, as Ben has provided information about accessible documents to the Ministry of Education, which in turn has widely circulated the information to teachers. Hopefully a repeat of this situation will be avoided in the future.

In an attempt to assist the continuation of vital service provision, Ben has established a GoFundMe page where all funds raised will be utilised for the benefit of people with vision impairment and education provision. This is considered an ICEVI Pacific activity. To date, AUD\$1535.00 has been raised and sent to the Fiji Society for the Blind, to support the continuation of their outreach service through the provision of equipment and bus fares for staff to reach children with vision impairment and their families in remote villages. Further fundraising efforts, if successful, will address funding shortages and projects in other Pacific Island countries. Donations can be accepted from around the world via the secure GoFundMe portal: <https://www.gofundme.com/f/education-for-all-blind-students-in-the-pacific>

**Fiji Society for the Blind celebrates 50 years**

In October, the Fiji Society for the Blind, the only Fijian provider of services to people who are blind, low vision and those with additional disabilities celebrated its 50<sup>th</sup> anniversary with much fanfare and media coverage throughout Fiji. The occasion was marked by a visit from the Fijian Prime Minister and the establishment of eye clinics to test the eyesight of the general public. Tours of the facilities were also offered. In addition, and as part of Fiji's 50<sup>th</sup> year of independence, the Society's Director, Mrs Barbara Farouk, received the prestigious Fiji 50 medal from the President of Fiji in recognition to over 20 years of service to the Society and to people who are blind.

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## **Report: Sonokids Ballyland in 2020**

**Phia Damsma**

Sonokids Ballyland is a popular suite of accessible, educational, gamified software and apps. Ballyland supports students' step-by-step building of fundamental skills for the STEM curriculum and skills of the Expanded Core Curriculum. Including: emergent keyboarding skills, the use of built-in screen reader accessibility on touch devices (VoiceOver, TalkBack), Computational Thinking & Coding, and Sonification technology principles. The Ballyland accessible eLearning platform currently consists of 15 apps: for Windows PC, iOS (iPad), Android tablets and Smart speaker technology (most apps in English, some in German, Dutch and Spanish). Digital learning is supported by specifically designed Ballyland tactile learning tools (2D and 3D).

Visit the Sonokids website on [www.sonokids.org](http://www.sonokids.org) for all information, subscribe to the Ballyland Newsletter to keep up to date with new releases, or find Ballyland on Facebook. Email: [support@sonokids.org](mailto:support@sonokids.org).

Early 2020 Ballyland received the global 2020 Zero Project Award for Innovation in Inclusive Education, in Vienna, Austria. During the pandemic, Sonokids offered all apps for free. Hundreds of thousands of downloads showed the value of Ballyland as fun eLearning at its best, even during challenging times. Educators working under difficult circumstances can still request Sonokids' support to teach with Ballyland.



Ballyland CosmoBally in Space is available as a free app (for iOS and Android). It introduces students to the solar system by way of CosmoBally and her friends in Ballyland.



Ballyland CosmoBally on Sonoplanet (due for release in 2021) uses sonification to enable the tracing of lines and shapes on the touch screen, make interactive, sonified drawings, and learn to analyse sonified data in a playful way.



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## **Report: Investigating 3D printing for access to graphics by people who are blind or have low vision**

**Leona Holloway**

In a three-year ARC Linkage project that began in October 2018, Monash University is working with the vision impaired community to investigate the use of 3D printing for accessibility. Project partners are the Round Table on Information Access for People with Print Disabilities Inc. (with financial support from SPEVI), the Department of Education and Training Victoria, Royal Institute for Deaf and Blind Children (RIDBC), Guide Dogs Victoria and The Royal Society for the Blind (RSB).

As touch testing was not possible in 2020 due to COVID social distancing measures, focus was instead placed on community support, publication of guidelines and materials design.

A working group for people using 3D printing for accessibility was formed under the auspices of the Australia and New Zealand Accessible Graphics Group (ANZAGG) in May 2020. With over twenty active members, the group meets monthly, with a focus topic for discussion or guest speaker at each meeting. We also maintained working relationships with similar groups on 3D printing for accessibility in the USA and Europe to ensure that we build on worldwide collective knowledge and avoid replication of efforts.

In collaboration with our partners, we produced guidelines on when to use 3D printing for touch readers, where to find 3D printing designs, 3D printing design software recommended to create your own models, 3D printing by people who are blind or have low vision, and understanding 3D prints through touch. The guidelines are all freely available on the Round Table website at <http://printdisability.org/about-us/accessible-graphics/>.

Design of 3D printable resources focused on the project goals of using 3D printing to support tactile literacy, access to STEM and mapping. Tactile game pieces for scrabble, bingo, boggle, hangman, crosswords, Qwirkle, Catan and a braille slider puzzle were designed to support tactile literacy. Models such as braille and tactile water cycle components were created to be used for active learning by blind and sighted students together in inclusive classrooms. And a

range of 3D printed materials to teach street crossing concepts and specific intersections were designed based on interviews with O&M professionals throughout Australia.

Monash University team members were pleased to present research papers on 3D printing for accessibility at premier international venues. “Smooth sailing? Autoethnography of a recreational travel by a blind person”, presented at the International ACM Conference on Computers and Accessibility, discusses the production and use of 3D models of a cruise ship. “Hey model! Natural user interactions and agency in accessible interactive 3D models”, presented at the CHI Conference on Human Factors in Computing Systems, investigates interactivity for people who are blind or who have low vision to independently explore 3D printed tactile models.

The project will continue in 2021. Vision specialist teachers, touch readers and accessibility providers are invited to contact [leona.holloway@monash.edu.au](mailto:leona.holloway@monash.edu.au) if you would like to be involved in trialling materials or sharing your needs and experiences.

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## **Report: Survey Results on Calculators**

**Pranitha Moodley**

### **Background**

At a Mathematics workshop held at the Royal Institute for Deaf and Blind Children (RIDBC), I was approached by several Itinerant Specialist Teachers (Vision) to address their frustrations in teaching STEM subjects to students with blindness and low vision, in particular the choice of suitable calculators to assist them in successfully teaching Maths. The use of calculators has proved a particularly challenging area for people who are blind. To assess the responsiveness of teachers and students to know which calculators have been successfully used with students, a survey was sent out through the SPEVI website at the end of 2019.

The target population were teachers from Australian schools teaching blind or low vision students and using the Australian Mathematics curriculum. To narrow the field of STEM, the survey aimed to identify the most suitable calculators preferred and used by students to assist them in their Maths lessons. The survey included questions about how calculators have been used with magnification software and screen readers. It also required teachers to provide information on the model, manufacturer and price range that worked well for their students.

### **Survey responses:**

Responses were received from about 20 participants. Responses were received from New South Wales, Victoria, South Australia, Queensland and New Zealand, and included Specialist Teachers (Vision), students in high school ranging from year 10 to 12, past students who were either studying at tertiary institutions, students that were employed, parents, and teaching assistants.

The key results of the survey showed:

- The frustration that teachers and students experienced in choosing a suitable calculator.
- Not all calculators were NSW Education Standards Authority (NESA) approved, and calculators used differed from state to state.
- Some of the calculators recommended did not meet all the functions that were required.

- Calculator apps that showed potential were not approved by NESA. The ones chosen by NESA did not meet all the functions.
- Some calculators did not allow students to go back into their history to view previous input.
- Difficulties in finding a suitable calculator that could do what they needed in their Maths lessons.
- Students found that their calculators were different from the rest of the class and teachers had to teach the procedure separately to them to accommodate the differences.
- Navigation was a problem when using enlargement.
- Calculators did not read back the information to the student.
- Prices for recommended calculators were high.
- Parents did not have much knowledge on how to use these calculators and could not assist their child with homework.
- Difficulties in accessing an appropriate calculator disadvantages students from pursuing STEM as a subject beyond high school.

### **Conclusions and Recommendations**

- All participants surveyed reported that a discussion around this area was long overdue and was happy that this survey was sent out by a member of SPEVI Committee of Management.
- Specialist teachers (Vision) felt isolated in this area and reported that there was not enough information on this topic to address their concerns.
- A working group comprising of Charlie Roberts, Melissa Fanshawe, Trudy Smith and Pranitha Moodley met to make recommendations.
- Any further assistance for teachers and educators to connect, collaborate and learn from each other would be welcomed.
- More research is needed on this topic.

Leading on from here a Facebook group was created on 26 May 2020 to start a Maths discussion, post questions and offer ideas of support for students with vision impairment. The



group is named *Educators supporting students with V.I. in Maths*. Charlie Roberts is the admin person, Melissa Fanshawe and Pranitha Moodley are the moderators for the group. The group has 110 members in total from Australia and overseas countries.

**Pranitha Moodley**

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## Special Awards

### Knight Phia Damsma



**Photo:** Phia Damsma (centre), husband Otto, and Marion Derckx, Netherlands Ambassador to Australia, during the Knighthood ceremony at the 2020 SPEVI Conference in Adelaide. Used with permission.

Phia Damsma is best known as SPEVI's Co-President and Creative Director of Sonokids, the Ballyland apps that introduce children with vision impairment to the joys of computing through touch and play. Phia is less known as a Knight!

Much to the surprise – and delight – of delegates at the SPEVI 2020 Adelaide Conference, proceedings were abruptly halted by the arrival on stage of Ms Marion Derckx, the Netherlands Ambassador of Australia, who, unbeknownst to Phia, had arrived from Canberra that morning on behalf of Willem-Alexander Claus George Ferdinand, King of the Netherlands.

The Ambassador described Phia's many achievements and contributions to the field of disability and the broader society. Phia was then named Knight in the Order of Orange-Nassau for "her longstanding dedicated time and energy to society; for being a source of inspiration and for having stimulated other people while her work is of special high value to society".

The Order of Orange-Nassau is awarded by the King of the Netherlands for longstanding meritorious service to society, the State, or the Royal House. Phia has been called a 'Tomorrow Maker', someone with a dream of creating a better tomorrow for everyone, teaching technology skills to young children, with and without a disability, including children who are blind or have low

vision. Phia has received numerous awards for her work, including recognition by the United Nations.

SPEVI congratulates Knight Phia and acknowledges her efforts to engage children and young people with vision impairment in discovering for themselves what the world has to offer.

For more information about Phia's award, see

<https://www.netherlandsworldwide.nl/latest/news/2020/01/17/dutch-royal-decoration-for-ms-phia-scheffer-damsma>

## **About SPEVI**

The South Pacific Educators in Vision Impairment (SPEVI) Inc. is the major professional association for educators of students with vision impairments in Australia, New Zealand and the South Pacific region. SPEVI acts as the professional body in matters pertaining to the education and support of persons who are blind, have low vision, deaf-blindness, or additional disabilities. SPEVI membership is open to educators, professionals and parent groups who support and promote education for persons with vision impairment.

SPEVI Inc. is an Association incorporated under the laws of NSW, Australia – Registration number INC9889733.

## **SPEVI Vision**

To promote educational systems in Australia, New Zealand and the South Pacific in which diversity is valued and disability is not viewed as a characteristic by which to judge a person's worth.

## **SPEVI Mission**

To stimulate professional and public debate and action on vision impairment issues and change which affect or have the potential to affect the daily lives of persons who are vision impaired, while emphasising concepts of inclusive, responsive educational communities and interdependence between learners and families within those communities where all people are valued.

## **SPEVI Aims**

- To be recognised as the professional body of educators whose specialty is in matters pertaining to the education of persons with vision impairment in Australia, New Zealand, and Pacific Island Countries.
- To advocate on behalf of members, persons with vision impairment and parents/carers for equitable education access and participation, in accordance with international and national disability anti-discrimination legislation.
- To encourage the highest standards in the educators of persons with vision impairment by promoting research and professional training for general and specialist teachers.

- To promote and facilitate the interchange of information and collaboration among educators, professionals, parent groups and the broader community concerning education and equal opportunity for persons with vision impairment.
- To encourage the use of appropriate mainstream and assistive technologies, resources and optical and non-optical aids, in the education of persons with vision impairment, and to promote teacher education programs in the use and care of existing and new techniques and technology.

### **SPEVI Structure**

SPEVI operates at two levels:

- National level, by means of the Committee of Management.
- Local level (state/territory), by means of a Branch comprising SPEVI Councillors and members who reside in the location.

### **SPEVI Code of Ethics**

- All members of SPEVI will:
- Work for the good of SPEVI and actively support and promote its Aims as defined in the SPEVI Constitution.
- Act honestly and with respect and integrity at all times.
- Provide leadership for all members of SPEVI to foster high ethical standards.
- Act to enhance public awareness of SPEVI's objects; and
- Maintain transparency of decision-making within SPEVI.

### **Committees of Management**

SPEVI is managed at the national level in Australia and New Zealand by a Committee of Management. The national Committees, subject to SPEVI's Constitution and to any resolution passed by SPEVI in general meeting, are responsible for the governance and management of the activities of the Association and its members. The Australian Committee manages and supports Australian and the Pacific Island members.

## **Australia Committee of Management, 2019 - 2020**

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**For a full list of Australian SPEVI Councillors, please visit the SPEVI website:**

[www.spevi.net](http://www.spevi.net)



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