



**MONASH** University

**THROUGH THE EYES OF SECONDARY STUDENTS WITH VISION  
IMPAIRMENT: A PHENOMENOLOGICAL INQUIRY INTO INCLUSIVE  
SCHOOLING.**

**Jill Opie**

M. Ed. (Special), Monash University  
Grad. Cert. Career Education RMIT  
B. Ed. University of Melbourne  
Dip. Ed. Monash University  
B. Sc. Monash University

A thesis submitted for the degree of Doctor of Philosophy  
Monash University 2017  
Faculty of Education

## **Copyright notice**

© Jill Opie (2017).

Except as provided in the Copyright Act 1968, this thesis may not be reproduced in any form without the written permission of the author

## **Abstract**

My research explores the experiences of education for secondary school students with vision impairment attending mainstream schools. How inclusion was enacted in their education is revealed in the nine scholarly articles presented in the thesis. Considerable research has been conducted regarding the schooling requirements for students with vision impairment, there has been relatively little undertaken which gives the students themselves the opportunity to voice their understandings of their schooling. This study addressed this gap and provides a rare opportunity to explore understandings of schooling from the perspective of the students.

In investigating how students with vision impairment experience their schooling I employed a qualitative phenomenological approach, using Interpretative Phenomenological Analysis (IPA) for individual case studies. IPA is concerned with how an individual understands his or her life-world within a specific context. Participants recounted their own stories which afforded me the opportunity to offer an interpretative account of what schooling meant for them. Their narratives concerned the challenges they faced within schooling and in wider social contexts.

Literature researched both prior to and after the interviews included detailed consideration of vision impairment in the context of schooling today. Globally, inclusive education is an expectation, with schools catering for all students regardless of race, colour, sex, language, religion and disability. There are concerns that the reality for students with vision impairment attending mainstream schools may often be exclusionary, with access to an equitable and quality education not a reality for individuals. Seven secondary students with vision impairment attending mainstream schools were interviewed, and in some cases their aides, parents and teachers also participated.

My student participants spoke of the difficulties they faced in their schooling, which appeared far from equitable when compared to that of their peers. Students related experiences of exclusion highlighting factors of isolation, bullying, inappropriate teacher and aide support, inability to access the curriculum, exclusion from some subject areas, and lack of adjustments to support their specific needs. These issues were explored in detail. My research challenges the efficacy of policies and practices concerning the inclusion of students

with vision impairments in mainstream schools. The implications of this research are twofold. Firstly, students with vision impairment must be included in discussions about their own schooling. Secondly, a greater understanding of vision impairment by school personnel would be likely to reduce exclusionary practices but staff require information and support to make this happen. My research suggests that there is a need for teacher education (both pre-service and in-service) and that educational leadership should embrace and enact national and international policies concerning inclusion in mainstream schools if inclusive schooling is to become a reality.

## Thesis including published works declaration

I hereby declare that this thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

This thesis includes nine original papers published, accepted or under review in peer reviewed journals. Five articles have been published, another accepted for publication and three are currently under review. The core theme of the thesis is the experience of inclusive schooling for students with vision impairment attending mainstream secondary schools. The ideas, development and writing up of all the papers in the thesis were the principal responsibility of myself, the candidate, working within the Faculty of Education under the supervision of Professor Joanne Deppeler and Associate Professor Jane Southcott.

The inclusion of supervisors as co-authors reflects the fact that IPA analysis requires collaborative analysis of data. In the case of journal articles, thesis chapters 4 to 12, my contribution to the work involved, acknowledging collaborative analysis, was as follows:

Thesis Chapter	Publication Title	Status (published, in press, accepted or returned for revision, submitted)	Nature and % of student contribution	Co-author name(s) Nature and % of Co-author's contribution*	Co-author(s), Monash student Y/N*
4	Schooling through the eyes of a student with vision impairment	Published	>95% Concept, collecting data, analysis and writing.	Supervisor Jane Southcott: IPA data analysis, input into manuscript <5%	No
5	"It helps if you are a loud person": Listening to the voice of a school student with a vision impairment	Published	>95% Concept, collecting data, analysis and writing	Supervisor Jane Southcott: IPA data analysis, input into manuscript <5%	No

6	“It is About Listening, about them Listening”: Feedback from a Student with Vision Impairment	Submitted	100% Concept, collecting data, analysis and writing	-	No
7	Inclusion for a student with vision impairment: “They accept me, like as in I am there, but they just won’t talk to me.”	Accepted	100% Concept, collecting data, analysis and writing	-	No
8	Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment	Published	>95% Concept, collecting data, analysis and writing	Supervisor Jane Southcott: IPA data analysis, input into manuscript <5%	No
9	‘You have to be like everyone else’: Support for students with vision impairment in mainstream secondary schools	Published	>95% Concept, collecting data, analysis and writing	Supervisors Joanne Deppler and Jane Southcott: IPA data analysis, input into manuscript <5%	No
10	Technology today: Inclusive or exclusionary for students with vision impairment?	In Press	100% Concept, collecting data, analysis and writing	-	No
11	Educating students with vision impairment today: Consideration of the expanded core curriculum.	Published	100% Concept, collecting data, analysis and writing	-	No
12	The experiences of Australian secondary school students with vision impairment of technology in inclusive settings: An ecological perspective.	Submitted	100% Concept, collecting data, analysis and writing	-	No

I have renumbered sections of submitted or published papers in order to generate a consistent presentation within the thesis.

Student signature:



Date: 26 October 2017

The undersigned hereby certify that the above declaration correctly reflects the nature and extent of the student and co-authors' contributions to this work.

Main Supervisor signature:

Date: 26 October 2017



## **Acknowledgements**

I would like to acknowledge my supervisors, Professor Joanne Deppeler and Associate Professor Jane Southcott for their support. Joanne, thank you for your direction, insights and support in making my writing and arguments clear. Jane, thank you for giving drive and inspiration in the pursuit of completing this body of work on schooling for students with vision impairment, an area of interest while teaching and now a chapter in my life that has been satisfied. Your wonderful humour was abundant, and your availability surpassed expectations and was overwhelming in its generosity. Your professionalism, knowledge and intellect provided great stimulus in the quest for excellence.

To the wonderful young students with vision impairment that so kindly opened their hearts to me in my pursuit of understanding their experiences, I can only say thank you. I hope from your experiences and my publications, outcomes result in an inclusive education becoming more of a reality for others with vision impairment.

Writing a thesis is a solitary experience in many ways, but with student stories so vividly imprinted in my mind, I always felt someone close at hand. I thank my family for their encouragement, support and understanding, even though they did wonder at times why I felt so compelled to put myself through this demanding process. A special thanks to Rod for all the coffee!

## Table of Contents

<b>Abstract</b>	<b>iii</b>
<b>Chapter 1 Exegesis</b>	
Overview	2
Introduction	3
Political context explored.	5
Australian policy – inclusion or exclusion?	10
Inclusive Education: Policy commitments of equity and quality	11
Educational performance: Quality	14
Disability in Australia	15
Educational provision for students with disabilities in Australia	16
Vision Impairment	17
Schooling of students with vision impairment.	18
Student voice	19
Contention	20
The aim of this study: Research questions	21
Significance and timeliness	21
Theoretical framework	22
The language of disability	28
Structure of thesis	32
Unfolding the thesis	32
<b>Chapter 2: Literature review</b>	
Teachers and inclusive education	36
Funding for students with disability	38
Curriculum	38
Support staff	39

Individual learning plans	40
Classroom challenges for students with vision impairment	41
Subject specific challenges for students with vision impairment	41
Social challenges for students with vision impairment	42
Orientation and mobility challenges	43
Accommodations/adjustments	44
Technology	44
Expanded core curriculum	47
Belonging	48
Self-determination	49
Self-concept	50
Bullying	51
Teaching students about disability	53
<b>Chapter 3: Research Methodology</b>	
Research paradigms	55
Using interpretative phenomenological analysis	61
Self in the research	68
Bracketing / performing the epoche	68
Important measures for credibility	69
Limitations	71
<b>Chapter 4    Schooling through the eyes of a student with vision impairment</b>	<b>73</b>
A single-case study looking at the social theme of isolation as identified from student revelations	
<b>Chapter 5    “It helps if you are a loud person”: Listening to the voice of a school student with a vision impairment</b>	<b>91</b>
A single-case study looking at consequences for the participant of vision impairment on friendships and personal identification	

<b>Chapter 6</b>	<b>“It is about listening, about them listening”:</b> Feedback from a student with vision impairment.	<b>119</b>
	A single-case study looking at the social theme of bullying as a consequence of revelations by the participant	
<b>Chapter 7</b>	<b>Inclusion for a student with vision impairment:</b> “They accept me, like as in I am there, but they just won’t talk to me.”	<b>148</b>
	A single-case study looking into the social theme of exclusion	
<b>Chapter 8</b>	<b>Establishing equity and quality:</b> The experience of schooling from the perspective of a student with vision impairment	<b>171</b>
	A single-case study looking at the revealed themes of access, technology and mobility	
<b>Chapter 9</b>	<b>Nothing really changes:</b> Support for the inclusion of secondary school students with vision impairment.	<b>192</b>
	A study looking at the overarching theme from all participants of support in mainstream classrooms	
<b>Chapter 10</b>	<b>Technology today:</b> Inclusive or exclusionary for students with vision impairment?	<b>215</b>
	The overarching theme of technology is considered from the perspective of all participants	
<b>Chapter 11</b>	<b>Educating students with vision impairment today:</b> Consideration of the expanded core curriculum.	<b>240</b>
	The delivery of the expanded core curriculum is explored	

<b>Chapter 12</b>	<b>Australian secondary school students with vision impairment experience technology in inclusive settings: An ecological perspective.</b>	<b>264</b>
	A study looking at one participant using the frame of Bronfenbrenner to view the place of technology in the student's environment.	
<b>Chapter 13</b>	<b>Discussion and Conclusion</b>	<b>287</b>
	Reflection on findings	<b>290</b>
	Recommendations for consideration from the participants	<b>295</b>
	Implications: Policy and practice	<b>296</b>
	Implications for Theory	<b>303</b>
	Concluding remarks and further research	<b>304</b>
<b>References</b>		<b>307</b>
<b>Appendices</b>	<b>Appendix A: Ethics Approval</b>	<b>370</b>
	<b>Appendix B: Permission Letter, Guide Dogs</b>	<b>371</b>
	<b>Appendix C: Explanatory Statement</b>	<b>372</b>

## List of Figures

<b>Figure 1</b>	A summary of the key stages in disability policy	<b>6</b>
<b>Figure 2</b>	Type of student disability (ABS, 2014)	<b>15</b>
<b>Figure 3</b>	Type of school attended by Australian students with disabilities (ABS, 2014)	<b>16</b>
<b>Figure 4</b>	Screenshot of vision acuity - eligibility for funding (Vision Australia, 2012)	<b>18</b>
<b>Figure 5</b>	Diagrammatic representation of Bronfenbrenner's bioecological systems.	<b>25</b>
<b>Figure 6</b>	A visual representation of Bronfenbrenner's bioecological systems theory	<b>27</b>
<b>Figure 7</b>	Components of the ECC	<b>48</b>
<b>Figure 8</b>	Summary of the analysis process	<b>66</b>

## List of tables

<b>Table 1</b>	Participant summary.	<b>67</b>
----------------	----------------------	-----------

## Terminology

<b>Aide</b>	Teacher aides, paraprofessionals, para-educators, learning support assistants, integration aides, special needs assistants
<b>Mainstream school</b>	Regular state or private school, as distinct from a special school.
<b>Vision impairment</b>	A person with measurable vision but who has difficulty or is unable to accomplish visual tasks, even with prescribed corrective lenses; includes those students denoted as legally blind, having less than 6/60 visual acuity or less than 10-degree visual field in their better eye (Vision Australia, 2017).

## Table of abbreviations

AACS	Australian Association of Christian Schools
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, and Assessment Reporting Authority
APA	American Psychiatric Association
CDA	Children with Disability Australia
DDA	Disability Discrimination Act
DEEWR	Department of Education, Employment and Workplace Relations
DET	Department of Education and Training
ECC	Expanded Core Curriculum
HoES	Head of Education Support
ILP	Individual Learning Plan.
IPA	Interpretative Phenomenological Analysis
MCEETA	Ministerial Council on Education, Employment, Training and Youth Affairs
NDS	National Disability Services
PD	Professional Development
SVRC	Statewide Vision Resource Centre
VEOHRC	Victorian Equal Opportunity and Human Rights Commission
VIT	Victorian Institute of Teaching
VT	Visiting Teacher (specialist in vision impairment)

## **Prefatory comment**

This thesis consists of published and submitted manuscripts under review. While the author has made every effort to avoid any unnecessary repetition, there are instances where this was unavoidable such as providing definitions of inclusion and vision impairment, and in the provision of details about the methodology of the study. Stylistic variations in the thesis presentation, such as referencing styles and US spelling, were required by various journals for manuscript submission. Elsewhere the thesis document is written using UK spelling and the APA6 referencing format. Person first language has been used except in quotations from student participants which remained unchanged. The references for each manuscript (published and pre-publication) are included with each paper in the required style for the particular journal, and all references used within the thesis placed at the end of the thesis document.

## Chapter One: Exegesis

*Disability is always experienced within a specific social context and it is always political, cultural and economic arrangements, rather than impairments, which exclude. (Riddell & Watson, 2014, p. 106)*

### Overview

Appropriate and accessible education for all is a social justice issue which has increasingly come into focus internationally over the past century with the development of a series of statements and declarations on human rights promoting the right to education for all. These declarations have highlighted the rights of people with disabilities to equitable access to quality education. International and Australian policies regarding disability highlight an educational commitment to equity and quality. In Australia despite a particular focus on the measurement of educational progress for accountability, and the provision of equitable and quality education for students with disabilities there continues to be disparities in the enactment of these principles. Schooling is available for students with special needs in the same settings as for their typically developing peers, with support services as required. Inclusion of children with disabilities into mainstream educational settings is an ongoing challenge for educators, and vision impairment is one such disability. The Australian Association of Christian Schools (AACCS) (2015) encapsulates what is necessary to achieve inclusive education:

Schools operate within a context. Broader government and social policies; societal norms, expectations, attitudes and values; and family values, beliefs and understandings all play a role. If it 'takes a village to raise a child' it takes a nation, a society, to educate a child with special needs. (p. 1)

This research study is a phenomenological inquiry that aimed to understand schooling for students with disability, and more specifically vision impairment, in Victoria, Australia. The study prioritises the voices and perspectives of students with vision impairment.

In this introductory Chapter, I outline the background to the study as a means of establishing the problem and the rationale for the study. The research questions and consideration of significance and timeliness follow. Included in this chapter are theoretical frames concerning political rationale of democratic societies (Rawls and Dewey) and education (Bronfenbrenner

and Vygotsky). The language of disability is then expounded in some detail as this remains a contentious issue. A brief explanation of the structure and the unfolding of the thesis concludes the chapter.

## **Introduction to disability education**

Since 1948 international legislation and policies have continued to progressively address issues of equity and quality in education, including for persons with disability (United Nations, 1948; 1975, 1989, 2006; UNESCO, 1981, 1994, 2000; OECD, 2012). Currently, international policy emphasises the right to education for all without discrimination, respecting diversity in an inclusive environment where barriers to accessing quality education or leading to exclusion are identified and removed (UNESCO, 2005, 2008, 2012; OECD, 2007). Australia's legislation of the Disability Discrimination Act, 1992 (Commonwealth of Australia, 2014) and Disability Standards for Education, 2005 (Commonwealth of Australia, 2006) and curriculum policies (Australian Curriculum, and Assessment Reporting Authority [ACARA], 2013) are consistent with these international policies, mandating that students not only have equity of opportunity but should also have equity of outcomes on the same basis as their non-disabled peers. Teachers are to ensure that all students with disability are able to participate in the Australian Curriculum on the same basis as their peers through 'rigorous, relevant and engaging learning programs drawn from a challenging curriculum that addresses their individual learning needs' (ACARA, 2013, p. 4). It is a further contention of the Ministerial Council on Education, Employment, Training and Youth Affairs, (MCEETA), that,

Schooling should provide all students with the high-quality education necessary to complete their secondary school education and make the transition to further education, training or employment. (2008, p. 13)

The states and territories of Australia have the responsibility to ensure national legislation and policies are enacted and upheld in their respective jurisdictions and do so through various policy and other mechanism. The Department of Education and Training (DET) (2015) in Victoria states that it is committed to "delivering an inclusive education system that ensures all students have access to a quality education that meets their diverse needs" (p. 3). Despite Australia's national and state legislative and policy frameworks there is strong evidence that what is espoused to be important by policy is not necessarily consistent with what is enacted and the experience of those in the system (Australian Research Alliance for Children and Youth [ARACY], 2013; AACS, 2015; Slee, 2013). Too frequently, what is offered as

inclusive education “is all too often little more than a set of adjustments applied to ideas and practices to give them the gleam of inclusion” (Slee, 2013, p. 17).

Reports for the Review of Disability Standards for Education 2005 (DEEWR) (2012); the Victorian Equal Opportunity and Human Rights Commission “Held Back: The experiences of students with disabilities in Victorian schools” (VEOHRC, 2012); and The Commonwealth of Australia Senate Report (2016) entitled “Access to real learning: the impact of policy, funding and culture on students with disability” among other research, have all highlighted features of Australian education that do not meet the expectations of inclusive education policy. These include the need for better preparation programs for teachers to develop practices that adequately prepare them for effective inclusion (Australian Institute for Teaching & School Leadership, 2013; VEOHRC, 2012); addressing the inequities that exist in accessing national testing for students with disabilities (ARACY, 2013; Senate Report, 2016; DEEWR, 2012); and the reevaluation of the reporting of outcomes, with the lack consistency not necessarily reflecting the ‘value’ that students may have gained from their schooling and consequently educational outcomes remaining unknown (ARACY, 2013; Davies, 2012; Dempsey & Davies, 2013). There were concerns that students with disability experienced insufficient resourcing, with curriculum materials often not available to them (Children with Disability, Australia, [CDA], 2015; Vision Australia, 2015); the systemic culture of low expectations significantly restricted the potential and educational outcomes of students with disability (CDA, 2015; VEOHRC, 2012); and that few students with disability had access to adequate levels and forms of education. It was stated that “to have any chance of accessing basic education rights in Australia, students with disability must rely on fierce advocacy—usually by families and the stars aligning” (Senate Report, 2016, p. 20).

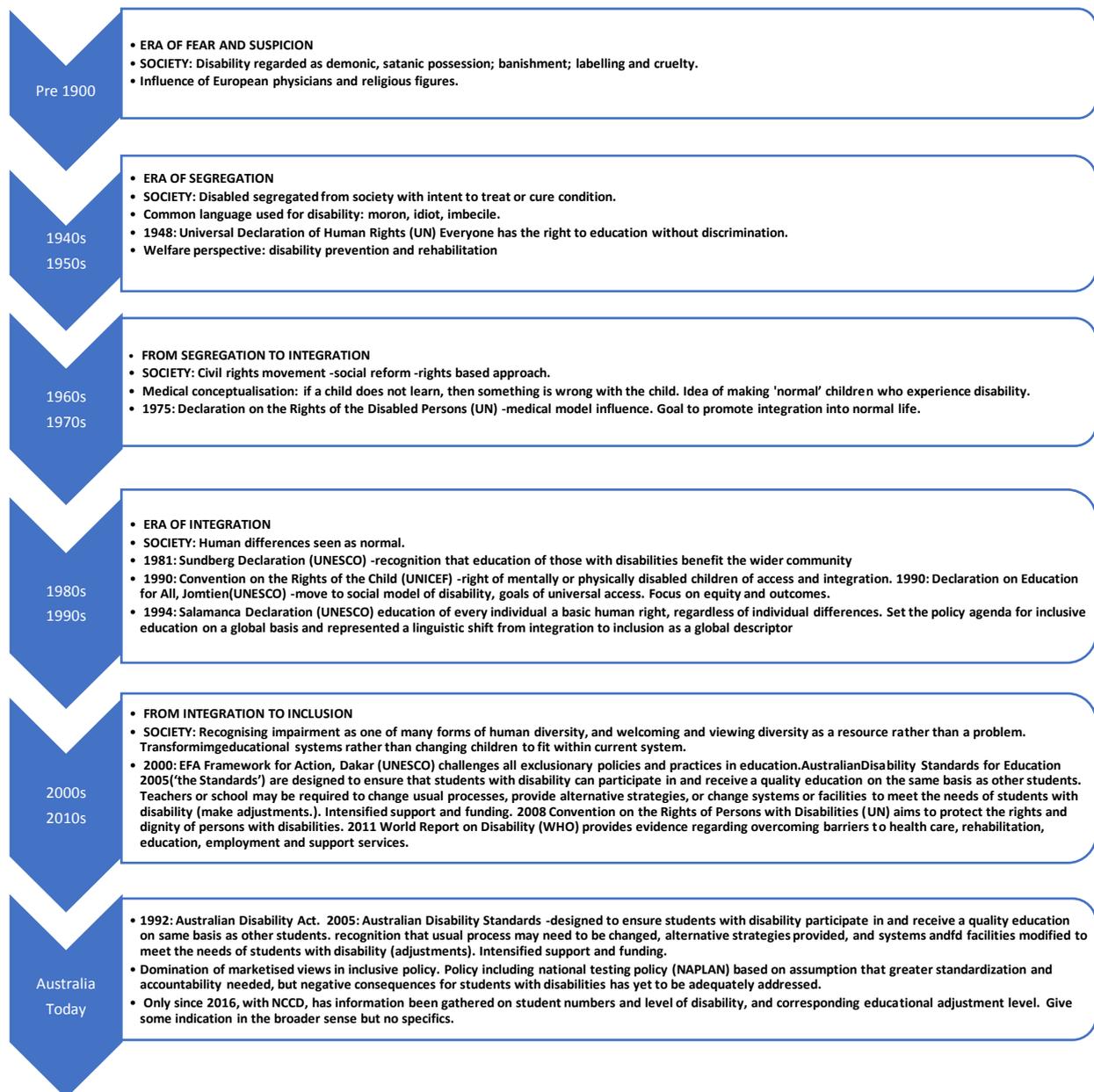
Inadequate educational access at school for students with disability results in their “diminished capacity for the rest of their lives, with under-education leading to unemployment, lower levels of health, social isolation and a lifetime of disadvantage” (Senate Report, 2016, p. 16). Statistics presented (Senate Report, 2016) claim 26 per cent of people with a disability do not go beyond Year 10, compared to 18 per cent of people without a disability; and further asserted that only 54 per cent of people with disability between the ages of 15 and 64 are employed, as opposed to 83 per cent of people without disability, and that 45 per cent of people with disability were living at or near the poverty line. A recent OECD (2010) report stated that Australia was ranked 21 out of 29 countries for employment of people with disability.

The World Report on Disability (WHO & World Bank, 2011) states that referral to the experience of impairment is essential in determining barriers, with the recommendation to “consult and involve children in decisions about their education” (p. 227). This is a corrective study putting the voice of the students into a research area that has been predominantly based on the views of academics, psychologists and educationalists. Without the input of students concerning their needs and experiences, it is difficult for schools to facilitate equitable and quality inclusive education despite existing policies and practices. Despite advocacy for inclusion in education that asserts that students with special needs should be educated in the same settings as their typically developing peers with support services as required, there are indications that the inclusion of students with vision impairment into mainstream schools may be exclusionary. In Victoria, secondary students with vision impairment, a low incidence disability, have been integrated into mainstream education exclusively since the closure of The Royal Institute for the Blind (RVIB) school in 2009. Although well-intentioned, this closure may not have served students with vision impairment well and their needs may not be being met in mainstream schools.

### **Political context explored**

*Education is an intensely political activity. The politics relate to competing views of the good society and how to secure it through schooling. (Slee, 2013, p. 22)*

Policies concerning inclusion have progressively developed over time, with evolving language and social motivation. The question is, have the policies changed in substance or impacted change to the education of students with disabilities themselves, or has there only been superficial changes? The stages of disability education have evolved through the initial stage of ignoring or hiding the disabled (pre-1960's), followed by segregation (1960's), integration (1980's) leading on to inclusion (1990's). Language changed from that based on a medical model of disability, to that of social justice. Analysis of policies and statements provides a documented legal and moral framework as well as a critical lens for interpreting and understanding (Peters, 2007). Education in Australia is framed by national and state policies, based on international policy frameworks, summarized in Figure 1, below.



**Figure 1.** A summary of the key stages in disability policy.

Following the Second World War the Universal Declaration of Human Rights was adopted by the United Nations for the rights of individuals, and proclaimed that everyone has the right to education (UN, 1948, Article 26). Disability issues throughout the 1940s and 1950s maintained a welfare perspective, which focused on disability prevention and rehabilitation (UN, 2002). Following the global rise of the disability rights movement in the 1960s and 1970s, there occurred a shift towards a rights-based approach, with the right to education recognized as key to employment opportunities, quality of life, self-advocacy, empowerment, social justice, and equity in society at large. The influence of a medical model

of integrated education remained apparent in both the language and focus of the Declaration on the Rights of Disabled Persons, 1975, in which a person with disabilities was defined as one who is “unable to ensure the necessities of normal social life due to deficiency” and the goal articulated as the right to “enjoy life as normal as possible” and to “promote integration in normal life” (UN, 1975, p. 1).

The Sundberg Declaration, 1981 (UNESCO, 1981) was viewed as a landmark document because not only were the specific rights of people with disabilities to education recognized and that their education would benefit the wider community, but it dropped the terminology ‘normal’ in favor of ‘ordinary’. The 1989 Convention on the Rights of the Child, Article 23 refers to mentally or physically disabled children and their right to “access and integration” and claimed that “all children have the right to an education that does not discriminate on grounds including race, colour, sex, language, religion and disability,” and rights should be “appropriate to the child's condition” (UNICEF, 1990, p. 8).

The World Declaration on Education for All (UNESCO, 1990) moved towards a social model of disability with inclusive concepts. It set out an overall vision of universal access to education for all children, youth and adults as well as equity among all, particularly noting the disabled. At the World Congress on Special Needs Education, The Salamanca Statement (UNESCO, 1994) “set the policy agenda for inclusive education on a global basis and represented a linguistic shift from integration to inclusion as a global descriptor” (Vislie, 2003, p. 18). The Salamanca Statement accepts that “human differences are normal and that learning must accordingly be adapted to the needs of the child rather than the child fitted to preordained assumptions regarding the pace and nature of the learning process” (UNESCO, 1994, p. 7). A child with disabilities was viewed as one who has “learning difficulties due to environmental disadvantages” (UNESCO, 1994, p. 6). The stated definition of disabled/disadvantaged includes people with linguistic differences, and those in poverty, and expands from physical and intellectual disabilities to social and emotional disabilities. In the Statement, it was further asserted that “every child has unique characteristics, interests, abilities and learning needs” (UNESCO, 1994, p. viii). The focus at the individual level was said to be on abilities, rather than deficiencies. At the institutional level, the statement went beyond issues of access and equal opportunity to address quality in the form of child-centered pedagogy.

In the Salamanca Statement it was clearly stated that governments must provide not only policies and resources but also accountability measures to address quality. It was

expressed that every person with a disability had a right to express their wishes regarding their education, as far as this could be ascertained, and parents had an inherent right to be consulted on the form of education “best suited to the needs, circumstances and aspirations of their children” (UNESCO, 1994, p. 6). It was proclaimed, “A change in social perspective is imperative. For far too long, the problems of people with disabilities have been compounded by a disabling society that has focused upon their impairments rather than their potential” (UNESCO, 1994, p. 7). The Statement also acknowledged that in many countries there were “well established systems of special schools for those with specific impairments” and that these systems “could represent a valuable resource for the development of inclusive schools” (UNESCO, 1994, p. 12).

Within the Framework for Action, Dakar, 2000 document (UNESCO, 2000) concern about inclusion was seen to have evolved from a struggle on behalf of children having special needs into one that challenged all exclusionary policies and practices in education related to curriculum, culture and local centers of learning. Instead of focusing on preparing children to fit into existing schools, the new emphasis focused on preparing schools so that they could deliberately reach out to all children. Equity and quality were visualized as complementary foundations of inclusive education approaches. The equity encompassed access, the processes and outcomes, while quality referred to achieving effective learning. After Dakar, the scope of equity in inclusion grew while quality was seen to have “been stuck” in a perspective disregarding the vast array of learning processes and their links to outcomes (Opertti, Walker & Yang, 2014, p. 156). “Gains in access” were not always seen to be accompanied by “increases in quality” (UNESCO, 2000, p. 17).

The United Nations Convention on the rights of Persons with Disabilities (CRPD) (UN, 2006) refers to an education that ensures the right to education of persons with disabilities at all levels, aiming to eliminate the barriers that exclude or marginalize learners. CRPD Article 24 refers to the development of an inclusive education system that ensures “those with disabilities are not excluded from the general education system on the basis of disability”, and are included in free and compulsory quality primary and secondary education “on an equal basis” with others in the communities in which they live (UN, 2006, p. 14). Furthermore, it is stated that reasonable accommodation to individual requirements through individualized support must be provided. Inclusion International (2009) notes that the CRPD Article 24 indicates a “delicate consensus” among international disability organizations reflecting the right to inclusive education “as well as the right of blind, deaf and blind-deaf students to be educated in groups” (Opertti, Walker & Zhang, 2014, p. 154). The requirement

to facilitate “the learning of Braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring” is specified in the CRPD (UN, 2006, p. 15). Language reflecting a medical model, which focused on the individualized provisions of ‘special’ needs was seen to reaffirm that it is “the unhealthy child that should be changed to fit society rather than society changed to welcome and include the child” Peters (2007, p. 103).

The linking of economic development to inclusive education is evident throughout many of the policy documents. Specific policy texts, contexts and consequences are inherently political, and identifying how particular issues are conceptualised in policy and enacted is essential in determining those groups in society who are advantaged or disadvantaged (Hardy & Woodcock, 2015). The Salamanca Statement, despite its emphasis on social justice issues, asserts that education for all will improve the efficiency and ultimately “the cost-effectiveness of the entire education system” (UNESCO, 1994 p. 2). UNESCO, in its Guidelines to Inclusion (2005), depicts inclusion as both a philosophy and a process. The philosophy is based on the right of all individuals to a quality education with equal opportunity – one that develops potential and respects human dignity. Inclusion is viewed as “a dynamic approach of responding positively to pupil diversity and of seeing individual differences not as problems, but as opportunities for enriching learning” (p. 12). As a process inclusion is concerned with the identification and removal of barriers, the presence, participation and achievement of all students, and involves an emphasis on learners who may be at risk of marginalization, exclusion or underachievement (UNESCO, 2005). Inclusive education should promote equality in the classroom, with schooling reflecting that people’s differences are a naturally occurring and valuable part of society. This stance looks at education through “an inclusive lens [which] implies a shift from seeing the child as a problem to seeing the education system as a problem” (UNESCO, 2005, p. 26).

The stances of UNESCO and OECD occupy positions along a spectrum of concerns about inclusion, with more inclusive policy settings advocating and valuing diversity, and with others more concerned about cost, and more human capital conceptions of worth. The spectrum location could be seen to reflect how broader neoliberal influences and pressures appear in varying policy settings, and are challenged or defrayed (Hardy & Woodcock, 2015). As for Australia, Slee (2013) contends,

Although our education and political rhetoric is replete with epithets of inclusion, engagement and community, competitive individualism is the ethical foundation for schooling, and students, having been reduced to the bearers of results in a performance-

driven education policy environment, are increasingly being calibrated and sorted, as schools, teachers and parents position themselves in the education marketplace. (p. 218)

In Australia, as elsewhere, market-place language and focus has been commonplace for education policy and decision making.

### **Australian policy – inclusion or exclusion?**

*Inclusion has become instrumental in the policy processes of exclusion in education.  
(Slee, 2013, p. 218)*

Australia has clear standards and obligations regarding the rights of children and people with disability to enjoy equal access to education, with policy clearly articulating the Australian Government's commitment and responsibility to protect, respect and promote the rights of all children including young people with disability to receive a quality, free and inclusive education. The Commonwealth Disability Discrimination Act 1992 (DDA) is the primary domestic means promoting the rights and entitlements of people with disability and eliminating discrimination, while the Disability Standards for Education (Commonwealth of Australia, 2006) clarify the obligations of education providers, and the rights of students with disability and their families. In a country that exempts the Department of Immigration "from the provisions of disability discrimination legislation to ensure that its borders are protected from the economic burden of disabled people" (Commonwealth of Australia, 2014, section 52) thereby endorsing prejudice against disabled people, the question arises of "whether inclusive education is possible when exclusion is a political disposition" (Slee, 2013a, p. 895).

The DDA (Commonwealth of Australia, 2014) makes it unlawful to discriminate on the basis of disability, with aims of the legislation stipulated as the elimination, as far as possible, of discrimination against persons on the ground of disability in the area of education and training; ensuring, as far as practicable, that persons with disabilities have the same rights to equality and to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community. However, Whitburn (2014a, p. 9), an insider scholar of vision impairment, claims that the "use of terminology such as 'as far as possible', 'as far as practicable' while maintaining an 'us' versus 'them' mentality through constant reference to the rights of persons with disabilities compared with the rest of the community, is abhorrent". He asserts that the

national disability legislation in Australia appears to exist “as little more than a token gesture” and that “the language used contributes to its inadequacies” (Whitburn, 2014a, p. 7). The choice of language to describe people with disabilities is a powerful way of forming their social construction (Priestley, 1999). The DDA policy demarcates a contrast between abled-bodied and disabled people, suggestive of people with disabilities having to be “incorporated” into the social system of the non-disabled, which “engenders a process of othering and categorization in which the construction of the disabled person in the policies comprise their limitations” (Devlin & Pothier, 2006, p. 5). Throughout the policy there is constant mention of ‘equal opportunities’ for people with disabilities, in contrast to those who do not have disabilities. Hodkinson (2012) points out that the term inclusion itself insinuates that a particular other is to be included into the whole. With the focus on inclusive ideals, the language contained in policy defines the possibilities of inclusive practice (Hunt, 2011). The marginalisation of disabled people is inevitably associated with the embodiment of their impairments (Whitburn, 2014). Factors relevant to marginalisation are bestowed understanding, the common uncomplimentary perceptions of disability, professional knowledge and language control; and the active protection of accepted norms, which together, cause a “depleted spirit in ... society” (Slee, 2013, p. 895). People tend to ascribe otherness to those with disabilities, with continued linking of physical, sensory or intellectual impairments with principles of tragedy (Oliver, 2009; Slee, 2011; Titchkosky, 2007).

### **Inclusive Education: Policy commitments of equity and quality**

*Access to education is a basic human right, but for many students with disability in Australia, it is a right which they are prevented from accessing. (Senate Report, 2016, p. 15)*

Equity and quality have been established as principles that underpin education for all children regardless of circumstances or ability throughout the world (ARACY, 2013). Definitions of inclusive education from international conventions and legislation focus on equity and access to high-quality education for all, while respecting diversity (UNESCO, 2008). This research was grounded on the following definition of inclusive education having a broad international agreement (ARACY, 2013, p. 10):

Education is not simply about making schools available for those who are already able to access them. It is about being proactive in identifying the barriers and obstacles learners encounter in attempting to access opportunities for quality

education, as well as in removing those barriers and obstacles that lead to exclusion. (UNESCO, 2012, p. 1)

Inclusive education values cooperation, equity and diversity and aims to involve all marginalized and excluded groups previously discriminated against and denied what is available to others in the mainstream (Peters & Oliver, 2009). Inclusion implies that if participation becomes an issue for any student, whether arising from disability, gender, behaviour, poverty, culture, refugee status or any other reason, the desirable approach is not to establish special programs but to expand mainstream thinking, structures, and practices so that all students are accommodated (Shaddock, MacDonald, Hook, Giorcelli, & Arthur-Kelly, 2009). UNICEF (2010, p. 31) defines inclusion from a whole-school approach, of how effective schools are at making practical changes so that all children, regardless of their differences or ability, can succeed. Inclusive education is an approach that looks to transform education systems as a response to the diversity of learners (UNESCO, 2003), supporting their students to reach their learning potential without pre-setting barriers or lowering expectations (OECD, 2012).

The OECD finds education “one of the most powerful levers available to make society more equitable” (OECD, 2007, p. 11), although achieving equity through education has been elusive, with policy implications varying with different understandings of equity. Equity understood as fairness suggests redistributive policies, with particular social groups identified as having greater needs thus requiring greater support and resources than others. Equity considered in terms of inclusion and the need for recognition lead to policies that seek to amend the negative influences of social and cultural difference (Fraser, 1997; Young, 1990). Equity understood in terms of equality of opportunity and sameness of treatment would focus on provision, inputs, representation, participation and choice, promoting calls to provide opportunities for all to realize their potential.

A challenge for those involved in inclusive education has been the linking of equity with quality, with both equity and quality variously defined (Deppeler, Forlin, Chambers, Loreman & Sharma, 2015). Equality/equity may be viewed as the aim to reduce educational disadvantage, arising from both access to schooling and access to the curriculum, whereas quality involves the recognition of measurable and non-measurable outputs of education, as well as the process by which education takes place. Equity in education can be viewed in terms of the school system, the school and the individual. From a systemic perspective, there must be provision of fair and inclusive education services that lead to enriching student

learning. At the school level, schools must provide fair and inclusive education and an adequate learning environment for students to achieve the outcomes worthy of their effort and ability. From an individual perspective, students must be given the opportunity to reach their learning potential (ARACY, 2013). Further, Slee (2001) contends that the goals of equity and equality that drive a social justice view of inclusive schooling contain three basic principles: there is extensive and inclusive participation in decision making; all students are included rather than schools being driven by the exclusionary practices of market driven measurable outcomes; and thirdly that education is a means of founding democratic citizenship.

The inclusive education model shifts the focus of educational policy and practice placing the problems associated with diversity within the social institution (Peters & Oliver, 2009). While inclusion requires “a focus on all policies and processes within an education system, and indeed all pupils who may experience exclusionary pressures”, many educational contexts retain emphasis on students with disabilities (Ainscow, Farrell & Tweddle, 2000, p. 228). As articulated in the Senate Report,

Barriers take multiple forms, including difficulties enrolling, failure of schools to provide the reasonable adjustments required by students, exclusion from school activities... low expectations of students with disability from school staff and others, leading to a failure to take seriously the educational needs of students. (Senate Report, 2016, p. 15)

Equity has been drawn into policy in the context of marketization, with market reforms widespread in the education systems of western liberal democracies, justified in terms of the need to remain competitive in a global education race (Rizvi & Lingard, 2010; OECD, 2013). Educational equity and economic competitiveness are presented as harmonious and complementary goals in global policy discourses and national policies (Rizvi & Lingard, 2010; Savage, 2013). The OECD has moved the consideration of equity towards that based on measuring and understanding equity via student outcomes in comparative assessments such as the Program for International Student Assessment (PISA) (Savage, Sellar & Gorur, 2013). It was stated that “we [Australia] are categorised as a system that is achieving only average equity, meaning the impact of student background on educational outcomes is stronger in Australia than it is in other OECD countries” (DEEWR, 2011, p. 105). Current equity programs in Australian schooling combine substantial funding commitments and conceptions of educational disadvantage with a broader intensification of testing regimes and

effects of curriculum and pedagogy (Savage et al., 2013). Policy settings that encourage marketization have been promoted to improve school effectiveness and the educational outcomes of disadvantaged students.

### **Educational performance: quality**

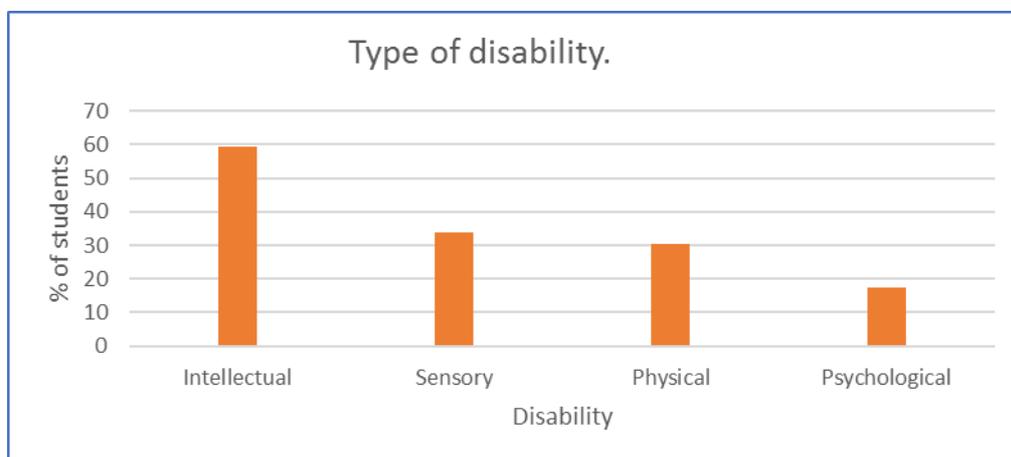
Various reforms and policy in Australia frame equity in both social and economic terms emphasising “marketised and globally competitive schools” (Savage, 2013, p. 186). The National Assessment Program Literacy and Numeracy (NAPLAN), (2014), is the current national assessment program. The My School website was introduced to publish and compare the results of NAPLAN and other data for nearly all Australian schools (Savage et al., 2013). Schools are measured by the test performance of their students, and positioned on league tables which may be resulting in the acceptance of enrolment from students strong academically, and rejecting those who present with a risk of failure. Students with disabilities may be kept from taking the tests to ensure their results do not influence the school’s standing. The single testing method used is not viewed as providing an equitable situation for many students with disabilities (Cumming & Dickson, 2012). Many students with disability do not have any alternative measures to demonstrate they have made educational progress (ARACY, 2013). These inconsistencies mean “the educational outcomes for these students are unknown” and are typically not included in decision any making (ARACY 2013 p. 28). It has been claimed that equitable inclusion of students with disability in current Australian educational accountability testing “is not occurring from a social perspective and is not in principle compliant with law” (Cumming & Dickson, 2013, p. 221).

As presented in the DEEWR (2012) Report on the Review of Disabilities Standards for Education 2005, there were “significant concerns regarding the challenges posed for students with disability with the narrowing of the way in which schools were valued”, and measures of efficiency and accountability had a consequential impact of “discouraging schools from taking students who were seen to be problematic in a range of ways” (DEEWR, 2012, p.46). To achieve goals of fairness and inclusion a critical examination of the variance in impact of current education policy and associated practices on disadvantaged students and schools must be undertaken (Deppeler, Forlin, Chambers, Loreman & Sharma, 2015). A student’s physical presence in an education setting may mistakenly be perceived as indicating the student’s participation and inclusion, along with the misconception that inclusion involves a student adapting to a school environment rather than education adapting to meet

the individual needs of each student (Children with Disability Australia [CDA], 2015). Almost one-third of submissions to the development of the National Disability Services (NDS), (2012, p. 47) stressed that “far from ensuring young people with disabilities have every opportunity to realise their potential, the education system acts as a barrier to greater achievement and independence in their lives.” Despite the objective of the Standards being to eliminate discrimination, the NDS (2012) reported that discrimination continued to be rife within the current education system. It was recorded in the Senate Report (2016, p. 9), “The chance of accessing a quality education when you are a student with a disability is likened to that of winning the lottery.”

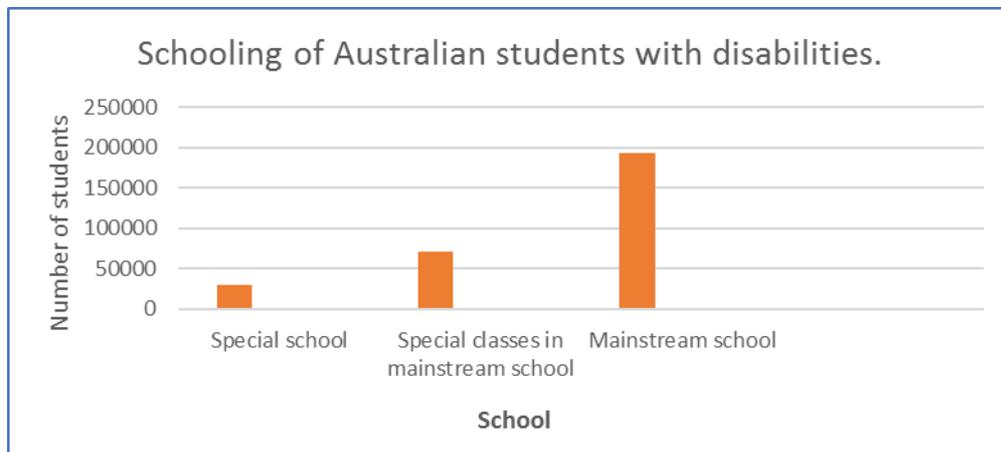
## Disability in Australia

In 2009, there were an estimated 292,600 children with disability attending school in Australia. These children were aged between 5-20 years and represented 8.3 per cent of all Australian children attending school in this age group (about 1 in 12 students) (Australian Bureau of Statistics [ABS], 2014). Around 59.5 per cent of children at school with a disability had an intellectual disability, while 34.0 per cent had a sensory disability, 30.3 per cent had a physical disability and 17.5 per cent had a psychological disability (ABS, 2014). (See Figure 2, below).



**Figure 2.** Type of student disability (ABS, 2014).

Of the 292,600 children with disability attending school, 28,900 (9.9%) attended special schools, 71,000 (24.3%) attended special classes in mainstream schools, and 192,700 (65.8%) attended mainstream classes only). (See Figure 3, below).



**Figure 3.** Type of school attended by Australian students with disabilities (ABS, 2014).

For many of these children, however, their experiences at school are challenging with 61.4% reporting that they experienced difficulties at school in 2009 (ABS, 2014). The most commonly reported problems were learning difficulties (45.1%), communication difficulties (26.5%) and fitting in socially (26.5%) (ABS, 2014).

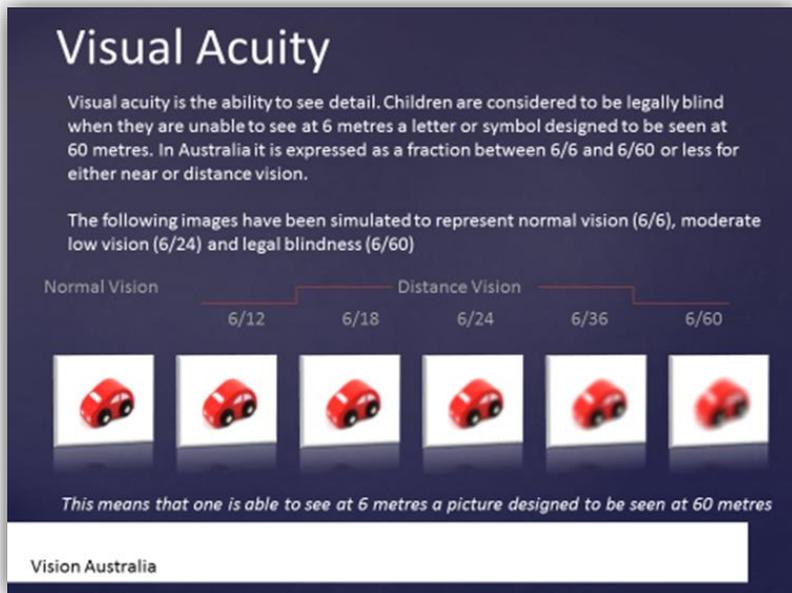
### **Educational provision for students with disabilities in Australia**

In Australian, both national legislation and state education policies indicate specific provisions for those with disabilities. All States and Territories must comply with the Disability Standards for Education, 2005 (Commonwealth of Australia, 2006). There are a variety of settings available for students with disabilities including primary, secondary, and senior secondary schools as well as mainstream schools, special schools and special units in mainstream schools. Each education system, whether government, Catholic, or independent, has its own approach to providing services (Dempsey, 2011). Australia’s implementation of inclusive education policy is impacted by the complexity arising because within states and territories, each jurisdiction is autonomous in its education policy and education practice (Deppeler et al., 2015). There is a “lack in uniformity for funding and provisions” for students with disabilities, although all have firmly established structures for supporting students with disability, with detailed and often quite complex procedures for qualifying for the provision of the support deemed necessary (ARACY, 2013 p. 28).

This research is situated in Victoria, and like most states in Australia, there is a commitment to delivering an inclusive education system that ensures all students have access to a quality education that meets their diverse needs (DET, 2015). Students with disability are able to access a range of placement options including inclusion in regular classes and attending special schools. There are more than 80 special schools in Victoria (Principals Association of Specialist Schools, Victoria, 2009), providing educational programs for over 7,000 students with a variety of special needs, including deafness, autism, intellectual disability, and emotional and behavioural difficulties. The main support in Victoria is provided through the Program for Students with Disabilities (DET, 2015), which is a supplementary funding program for schools, targeting students with moderate to severe disability. Assessment is an initial component of this program, and is provided through an external agency to determine eligibility for extra support (ARACY 2013). A range of support services such as physiotherapy, speech therapy, occupational therapy and counselling are also provided to students through both government and private providers in all jurisdictions. While access to separate special schooling options and paraprofessional support is available in all jurisdictions, this may not be equally accessible within and across states and territories (Deppeler et al., 2015).

## **Vision Impairment**

A disability recognized for support by all states and territories of Australia is vision impairment. A student with vision impairment may be defined as a person with measurable vision but who has difficulty or is unable to accomplish visual tasks, even with prescribed corrective lenses, but who can enhance the ability to accomplish these tasks with the use of compensatory strategies, low vision devices and environmental modifications (Corn & Lusk, 2010; Vision Australia, 2012). For students with visual acuity of less than 6/18 with corrected vision or visual fields reduced to a measured arc of less than 20 degrees some support is available (DET, 2015; Vision Australia, 2012). This includes students who are deemed legally blind, having less than 6/60 visual acuity or less than 10 degrees visual field in their better eye) (See Figure 4, below).



**Figure 4.** Screenshot of vision acuity - eligibility for funding (Vision Australia, 2012)

### **Schooling of students with vision impairment.**

The Australian Blindness Forum (2008) estimated that there were approximately 3000 school-aged children who attend schools in Australia, with Vision Australia (2012) putting the number at closer to 4000 students. The exact figure remains unknown. Steps taken to ameliorate this include the introduction of the Nationally Consistent Collection of Data on School Students with Disability, (Australian Government Department of Education, 2015) with funding based on this data. The data will identify “how many students with a disability study in Australian schools, where they are located, and the level of adjustments provided for them to participate in schooling on the same basis as other students” (Australian Government Department of Education, 2015, p. 1). Information will be gathered on those students receiving or requiring some adjustments from teachers.

Most students with vision impairment attend inclusive mainstream schools in Australia (Foreman, 2011), demonstrating a clear change in philosophy since the pre-1970’s when the majority of students with vision impairments were educated in special schools (West, Houghton, Taylor & Ling, 2004). To comply with the Disability Standards, education providers must make ‘reasonable adjustments’ to accommodate all students with a disability, not just those who are eligible for support under the Program for Students with Disabilities. As a consequence, students with vision impairment generally receive adjustments to facilitate their inclusion into regular classrooms (Australian Curriculum, 2015; Cox & Dykes, 2001).

Adjustments may involve a combination of: addressing physical barriers to ensure access to buildings and facilities; modifying programs and adapting curriculum delivery and assessment strategies; providing professional learning and training for staff; accessing specialized technology or computer software or equipment; provision of study notes or research materials in different formats; services such as visiting specialist teachers or support staff; and employing personnel for personal care or mobility assistance (DET, Victoria, 2015; Statewide Vision Resource Centre [SVRC], 2015).

Concerns regarding the implementation of inclusive practices for students with vision impairments in mainstream schools in Victoria have been highlighted by the recent establishment of a private specialist primary school in Victoria for students with vision impairment, arising from a drive by parents (Insight, 2014). Government specialist schools exist which cater specifically for intellectual disabilities, others for autism spectrum disorders, physical disabilities and for students who are deaf or have hearing impairments. There are no government specialist schools in Victoria specifically targeted to meet the needs of students who are blind or vision impaired.

## **Student voice**

Relatively few studies have been undertaken which look at the equity and quality of education experienced by students with disabilities, or have considered their views and opinions (Ainscow, 2005; 2012; West et al., 2004). Even fewer have investigated the views of those with vision impairment (Khadka, Ryan, Margrain, Woodhouse & Davies, 2012; Whitburn, 2014c). It was stated in the World Report (2011, p. 46) that “to understand the lived experiences of people with disabilities, more qualitative research is required.” The impact of hearing the perspective of an insider is undeniable (Jones, 2013, p. 1), whether from families, teachers, school administrators or students. Furthermore, for teacher educators to appreciate some of the nuanced realities of inclusion, Jones (2013) contends there must be an explicit effort to hear the multiple perspectives of the key people involved. The power of capturing insider perspectives was recognized following the impact of stories told by Vietnam veterans of their experiences living with their acquired disabilities (Jones, 2013). By listening to the lived experiences of inclusion and exclusion from students themselves, Norwich (2002) contends a perspective is articulated that cannot be captured in any other way, allowing for a better appreciation for how school experiences impact the development of self-esteem and identity.

Little is known of how students with vision impairment make sense of their education in inclusive settings. Young people with disabilities generally and with vision impairment more specifically, have been left out of the conversation of how best to include them in schools (Allan, 2008; Slee, 2011). Many researchers have stated the need for educational research that considers the voices of young people with disabilities, particularly in educational contexts (Moriña Díez, 2010; Moss, 2013; Owens, 2007). It has been asserted that there may be a disconnection between the research and the reality in the classroom, necessitating listening to the perspectives of students with vision impairments themselves (Grima-Farrell, Bain & McDonagh, 2011). Understanding students' perceptions of their abilities and the activities they find challenging is important (Khadka et al., 2012). There is a belief is that through research focussing on listening to students with disabilities, not only will their perspectives enhance the solutions (Armstrong, 2005; Curtin & Clarke, 2005; Messiou, 2012) but listening to them about their needs and aspirations for schooling will empower them (Slee, 2011).

Despite the shift towards social justice in qualitative research (Lincoln, Lynham & Guba, 2011), few studies appear to have been undertaken that explicitly seek to know how young people with vision impairment who attend inclusive settings experience and subsequently produce meaning from schooling as it currently operates. The few journal articles published over the past 25 years that gave students with vision impairment a voice reported findings of insights into perspectives of inclusion (Higgins & Ballard, 2000; Whitburn, 2014b; West et al., 2004). More research is needed to give students with vision impairment the opportunity to elucidate upon their inclusive schooling experiences in order to gain insights which may benefit future delivery of quality and equitable inclusive education. It is after all the experiences of those with disabilities and their advocates that count (Allan, 2010; Barnes, 2010; Slee, 2011). The insights students with vision impairment have about the equity and quality of their inclusive education, at a time when insider perspectives are regarded as powerful but underrepresented by this group, is a strong justification for this research.

## **Contention**

The Australian Blindness Forum (ABF) (2008) expressed concern that specialist intervention for students with vision impairment is at times inequitable, lacking in quality, scope and outcomes. Consequently, it was claimed that many students with vision impairment leave compulsory schooling without the requisite skills that would enable them to gain further

education qualifications, employment, participate meaningfully in the community and live independently. The need for educators to listen to students with vision impairment is supported by statements from the UN Final report of the Ad Hoc Committee on a Comprehensive and Integral International Convention on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities (2006, p. 6) where it was asserted that “children with disabilities have the right to express their views freely on all matters affecting them, their views being given due weight.”

It is my contention that understanding the experiences of students with vision impairment is critical to any discussion of quality and equity of education. Research is required that will allow student voice via in-depth interviews that ask for reflection and personal opinion in order that we may learn ways an equitable and quality education could be made possible, recognizing the centrality of the students in their own education.

### **The aim of this study: Research questions**

The aim of this study was to gain insider understandings from senior secondary students with vision impairment of their schooling experiences, with a focus on how the objectives of equity and quality were or were not achieved during their education.

Research question:

What is the nature of the school experience for senior secondary students with vision impairment attending mainstream schools?

Sub questions:

How do students with vision impairment experience their education in terms of its equity and quality?

How successfully are students with vision impairment facilitated to engage academically and socially in their schooling?

### **Significance and timeliness**

This study allowed students with vision impairment the opportunity to share their experiences of schooling in mainstream secondary schools in Victoria. In doing so, exclusionary practices and enablers to inclusion could be explored as revealed by the students themselves rather than relying on the views and opinions of professionals, including psychologists, doctors, and ophthalmologists as most previous research in this area has done. By investigating the life worlds of students with vision impairment themselves, this study sought to interpret their

lived experiences of learning and school environments espoused to be inclusive. The limited research giving students with vision impairment a voice is acknowledged in this study. When giving students a voice, the extent to which barriers to learning exist for them may be explored. At a time when unemployment for students with vision impairment remains much higher than the average, and doubts are increasing regarding the validity of inclusive education meeting the needs of these students, the barriers for these students must be ascertained and corrected. Issues highlighted by students themselves must be targeted for any effective change to occur, while acknowledging the diversity within these students as not all will experience the same challenges.

## **Theoretical framework**

A theoretical framework informs the research study by providing a certain perspective on various aspects of the study. Such frameworks can help to shape the types of questions asked, to decide who participates in the study, to inform data collection and analysis, and to inform the implications made from the study (Creswell, 2013). In this study, the experiences of students with vision impairment in their educational environment was examined with consideration of the philosophical positions of Rawls and Dewey regarding democratic societies, and within the framework of Bronfenbrenner's bioecological systems theory and Vygotsky's sociocultural theory.

### **Democratic societies.**

The philosophical positions of Rawls (1921-2002) and Dewey (1859-1952) regarding education stem from the importance they place on democratic societies and have relevance to students within an inclusive education system (Berg & Schneider, 2012). Rawls, an American political philosopher in the liberal tradition, in his *Theory of Justice* (1971) envisions a society of free citizens holding equal basic rights, cooperating within an egalitarian economic system. His theory is viewed as a practical contribution toward settling the long-standing conflict in democratic thought between liberty and equality (Wenar, 2013). The three most fundamental ideas for Rawls of a democratic society are that citizens are free, they are equal, and that society should be a fair system of cooperation. Rawls looks to fundamental ideas implicit in the design of the society's government, in the written constitution that specifies individual rights, and in the historic decisions of important courts of law. Rawls' notion of equal citizenship suggests that each citizen can be characterized as having individual abilities, abilities that will not always parallel in type or in level to others. Within this context, while

each individual has different abilities, each holds a position on the same plane of social worth. Equality of opportunity concerns the liberty within the larger society for each individual to explore and exercise their individual abilities. Education, when viewed through Rawls' (1971) philosophical lens, adheres to an ethical approach, giving consideration to individualized contexts when making decisions.

Understanding of inclusion can be found in Dewey's (1957) notions of ethics and education within democratic societies (Berg & Schneider, 2012). An American social philosopher, he derived from his faith in democracy the notion of community and belief of citizenship as a mutual enterprise that could address social issues. Community was a core concept of his social philosophy (Giles & Eyler, 1994), with communal associations that gave rise to the moral, intellectual and emotional aspects of life. Dewey (1916, p. 418) claimed that the school was a "miniature community" and had faith in the school as a potential model of democracy. Dewey (1957) embraced the notion of 'function' and 'adjustment' for exceptional students in support of his ethic of self-realization within a democratic society.

Theoretical perspectives may be integrated with philosophical assumptions, constructing a picture of the issues being examined with the people to be studied and changes that are needed. Phenomenological research, in which the researcher identifies the 'essence' of human experience concerning a phenomenon as described by participants when exploring their 'lived experiences' marks it as a philosophy as well as a method. This will be further developed in Chapter 3, Methodology.

### **Educational Frame.**

#### ***Bronfenbrenner's ecology of human development.***

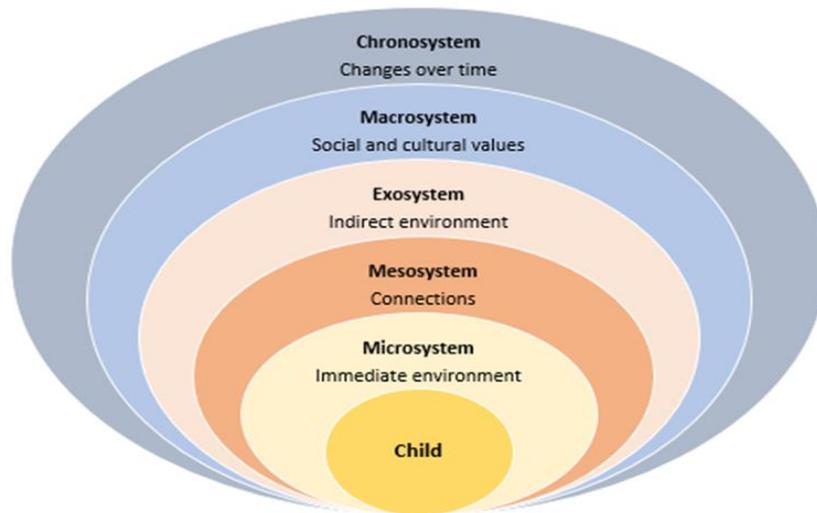
Bronfenbrenner contends,

Human beings create the environment that shape the course of human development. Their actions influence the multiple physical and cultural tiers of the ecology that shapes them, and this agency makes humans active producers of their own development. (Bronfenbrenner, 2005, p. xxvii)

Bronfenbrenner argued that to understand human development, the entire ecological system in which growth occurs must be considered. To embed this proposal in an educational context, the focus of the educational setting is the student, in this case a student with vision impairment. The actions of key participants including teachers, students, administrators and

the broader school community both shape and inform the multiple and unique environments that surround the student with vision impairment, and subsequently influence their development. Bronfenbrenner's (1979) ecological systems model and later bioecological model (Bronfenbrenner & Morris, 1998) were formulated to explain how the external environments in which children find themselves interact to influence how they will grow and develop. As studies involving the ecological model focused more on the "nature of the developing environments than on the characteristics of the developing individual" (Bronfenbrenner, 2005, p. xiv), Bronfenbrenner extended his theory in his bioecological model, where human interaction was regarded as an interactive process between individual and significant others and the environment regarded as the larger social and physical setting in which such interaction took place (Bronfenbrenner & Morris, 1998). This theory also added the component of time (chronosystem), claiming an individual's interactions with the systems that surround them would change over time, influenced by environmental events and societal era. The bioecological perspective incorporates personal factors, environmental factors and proximal processes into an understanding of human development (Bronfenbrenner, 1989, 1995; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998; Earls & Carlson, 2001). Proximal processes were defined as "progressively more complex interaction between an active, evolving human organism and the persons, objects, and symbols in its immediate environment" and it was through the proximal processes that "genetic potentials for effective psychological functioning are actualized" (Bronfenbrenner & Morris, 1998, p. 996).

Bronfenbrenner's theory recognised the unique characteristics of the central student and acknowledged the dynamic, bidirectional interrelations of a myriad of environmental influences from the systems surrounding that student (Darling, 2007). Providing an imagery of a nested set of Russian dolls, Bronfenbrenner distinguished five systems: intimate, interfacing, community, cultural and time which he termed microsystem, mesosystem, exosystem, macrosystem and chronosystem (Singal, 2006). (See Figure 5 below).



**Figure 5.** Diagrammatic representation of Bronfenbrenner’s bioecological systems.

Bronfenbrenner stated that “human beings are not only the partial products, but also the partial producers of their environment” (Bronfenbrenner, 1993, p. 6) stressing the interactive nature of this system. Bronfenbrenner’s model allows for consideration of the ‘lifeworld’ of the student within its various contexts; family, school and community environment alongside societal influences that play a part in how a student’s views may be formed. Educational opportunities and influences can ‘enable’ a student with vision impairment, enhancing the achievement of successful outcomes. Bronfenbrenner’s theory (1979, 1995) allows for the recognition of the salient features of the environment for students with vision impairment, including the personal support networks and community environments in which they live. As Bronfenbrenner stated (1994, p. 41), the bioecological model implies that,

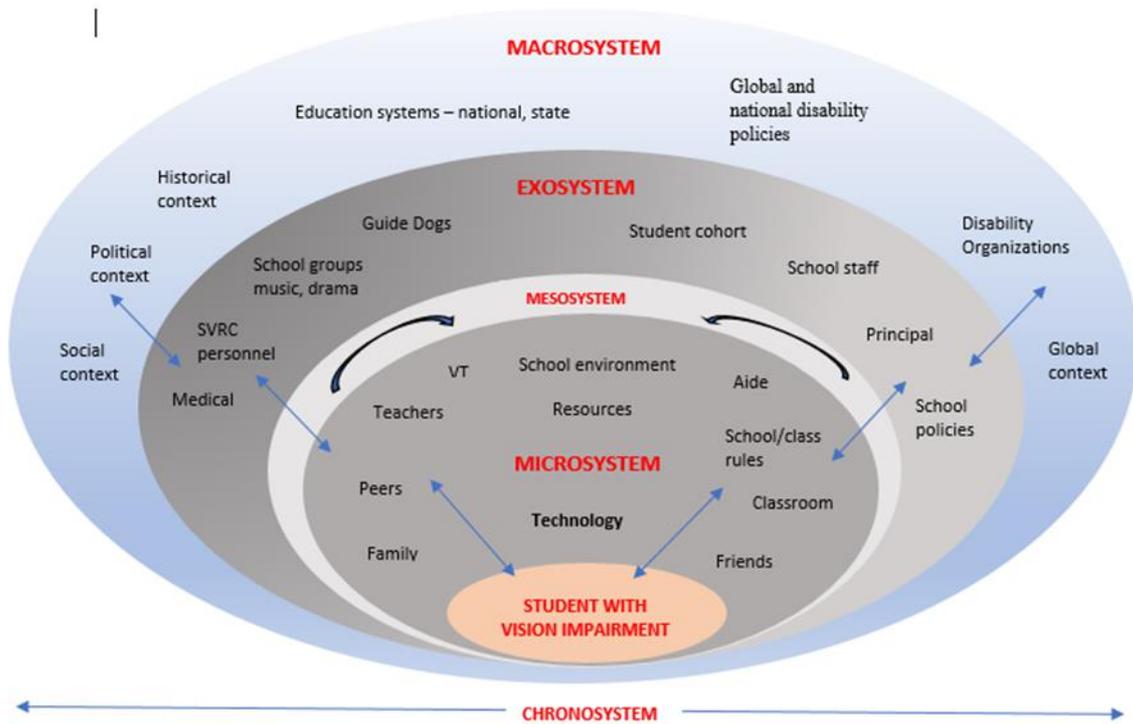
many human beings may possess genetic potentials for development significantly beyond those that they are presently manifesting, and that such unrealized potentials might be actualized through social policies and programs that enhance exposure to proximal processes in environmental settings providing the stability and resources that enable such processes to be maximally effective.

***Bronfenbrenner’s ecological theory applied to inclusive education.***

The theory of Bronfenbrenner may “provide a framework with which to explore school environments, through the lens of IE [inclusive education], increasing current knowledge and understanding of how IE is constructed in different environments and the consequences of

this for all learners” (Anderson, Boyle & Deppeler, 2014, p. 31). An understanding of the environmental factors and their influence on inclusivity could be developed, with the learner at the centre and each contributory factor located in the learner’s ecosystem. Participation, achievement and value were highlighted as determinants of inclusive education, with Anderson et al., (2014) noting that the student must be engaged, both academically and socially in all aspects of schooling, and work collaboratively with their peers on meaningful learning experiences from a relevant curriculum. Students must be achieving, and given access to learning goals that meet their individual needs within the bounds of the curriculum, and assessment (Slee, 2012). Students need to “be valued for who they are and what they have to offer, to others and to the school itself” (Anderson et al., 2014, p. 29).

Within the ecological environment, many factors affect the determinants of inclusive education. This study uses the bioecological framework to explore the impact of inclusive education factors as experienced by students with vision impairment, on their social inclusion and academic attainment. The individual student is at the centre of the system, and in this research one of the student’s many unique characteristics is the diagnosis of vision impairment. Surrounding the student, in the microsystem, is the student’s family, friends, teachers, peers, physical learning spaces, classroom cultures and routines, resources and the school grounds. The next layer, the mesosystem, incorporates the interactions between the various microsystems, with connections “continuously occurring, changing and evolving” (Anderson et al., 2014, p. 29). Factors of the exosystem are not directly within the student’s immediate environment and include family friends, parents’ work colleagues, neighbours, school principals, school rules and welfare agencies. The policies and legislation central to education and disability, accompanied by prevailing attitudes and issues of social justice are part of the macrosystem that encompasses all the internal systems. The chronosystem for this study is defined as the student’s educational life in the societal era of today. (See Figure 6, below). Bronfenbrenner (2005) wrote, “It follows that scientific recognition of the belief systems prevailing in the world of the developing person is essential for an understanding of the interaction of organismic and environmental forces in the process of development” (p. 149).



**Figure 6.** A visual representation of Bronfenbrenner’s bioecological systems theory, showing the systems of the environment, and their relationship to a student with vision impairment over their time at school.

***Vygotsky’s Sociocultural Theory.***

Reference is made to Vygotsky with respect to the importance of social interaction and engagement. Vygotsky (1896-1934) was instrumental in the perception of disability as a “sociocultural developmental phenomenon,” and that disability consisted of the “primary disability (organic impairment) and a secondary disability (distortions of higher psychological functions due to social factors)” (Dixon & Verenikina, 2007, p. 199). Disability as a social construction separated the “biological fact of disability and the debilitating social environment” in which the person exists (Jones, 1996, p. 350).

According to Vygotsky (1993) students should be maintained as much as possible in the mainstream social and cultural environment, as this was the only way for secondary disability to be prevented (Vygotsky, 1993). Vygotsky argued strongly against “limiting the education of disabled children” (Vygotsky, 1993, p. 216) expounding his concept of the zone of proximal development which emphasized development occurs within social contexts, a key aspect of sociocultural theory. Vygotsky advocated for education “that recognizes the

social relationships in the development of cognition” (Vygotsky, 1993, p. 85). He argued against the deficit view of children with disabilities, stating that if children’s differences were viewed primarily as a medical condition, “we never notice the gold mines of health inherent in each child’s organism” and further related his concern that the primary focus of special education was “on the children’s illness and not their health” (Vygotsky, 1993, p. 80). Vygotsky and sociocultural theory, refocused education on children’s strengths and abilities, rather than on remediating perceived deficits.

## **The language of disability**

Although participants in this study referred to themselves as blind students, or vision impaired students, and associations such as Vision Australia use similar terminology, journals have insisted on the use of person first language. Clearly this further attention was required to resolve the issue of the most appropriate language to use when addressing those with a disability.

### **The evolution of the language of disability.**

The dynamic nature of disability-related language is evident with many significant changes in language use occurring over the years. Historically people with disabilities were viewed with sympathy, as pathetic, and even with horror (Blaska, 1993). The early moral model of disability, influenced by religious doctrine, used language reflecting the view of disability as the result of sin (Solomon, 2012). In the 19th century with the growing prominence of the medical model, disability was viewed as a medical problem rather than a moral matter and language at this time defined groups and individuals based on their impairments, using terms such as retarded, deaf-mute, and spastic (Dunn & Andrews, 2015; Foreman, 2005). Individuals with disabilities were hidden from society, and people had little opportunity to understand the disabilities (Blaska, 1993). With little education available to children with disabilities, they had minimal opportunity to develop their capabilities and interact with others. This changed with the passing of the Education for All Handicapped Children Act in 1975 which ensured a free, appropriate, public education to people with disabilities aged 3 to 21 years in the US (Yell, 1995).

### **Person-first language development.**

The American disability movement with its rights based approaches was influenced by the American civil rights struggles around race and gender following their success in gaining

important legal recognitions and protections (Peers, Spencer-Cavaliere & Eales, 2014). An emphasis of the disability movement was that disability was only one trait of a whole person, not something that defined a person, and therefore individuals had the right to legal protection from unwarranted exclusion or discrimination based solely on having this trait (Americans with Disabilities Act of 1990; Titchkosky, 2001; US Equal Employment Opportunity Commission, 2001). This led to a radical shift in psychologists' written and spoken language to not equate people with impairment (Dunn & Andrews, 2015; Wright, 1983, 1991). Wright (1983) argued that everyone, including medical and psychological professionals, should refer to someone as a person with a disability rather than a disabled person, putting the person always before the disability. In 1990, the renaming of the US Education for All Handicapped Children Act to the Individuals with Disabilities Education Act reflected this sociocultural shift regarding the rights of individuals with disabilities and the importance of recognizing the person before his or her disability (Dang, 2010; University of Michigan, 2014).

The language standards adopted by the American Psychological Association (APA) reflected this rights-based approach to disability, mandating use of person-first language to maintain the integrity of individuals as whole human beings by avoiding language "that implies that a person as a whole is disabled (e.g., disabled person); equates a person with his or her condition (e.g., epileptic); has superfluous, negative overtones (e.g., stroke victim); is regarded as a slur (e.g., cripple)" (APA, 1992, p. 7). The APA (2008) further articulated reasons for adopting person-first language stating

It is essential for psychologists to understand how stereotypical and stigmatizing language, attitudes, and behaviours can demean and devalue people with disabilities and have an adverse impact on self-concept, self-esteem, self-efficacy, and relationships with others. (APA, 2008, p. 1)

As a result, person-first language to describe disability is widespread in academic and professional psychology in the US and widely mandated in scholarly journals and academic programs (Peers et al., 2014.)

### **Direct Language.**

Unlike America, the United Kingdom (UK) does not advocate the use of person first language. Their alternative to person-first language emerged out of the UK's disability movement. The idea behind this social model of disability is seen in the Fundamental

Principles of Disability document first published in the mid-1970s (Union of the Physically Impaired Against Segregation (UPIAS)).

It is society which disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society. (UPIAS, 1976, p 4)

It was argued that disabled people were not disabled by their impairments but by the disabling barriers they faced in society. Disability was conceptualized not as an inherent characteristic or trait of individuals, as in the US model, but as a set of socially and structurally produced relationships and practices leading to poverty, isolation, confinement, neglect, and the devaluation of an entire social class of people (Oliver, 1986; 2013; Peers et al., 2014; Shakespeare, 2013; Thomas, 1999). The social model of disability directed a focus on the economic, environmental and cultural barriers that were encountered by those viewed by others as having some form of impairment (Barnes, 2010; Clare, 1999; Thomas & Corker, 2002). Individuals were not seen to have disabilities, but rather societies seen to actively disable people (Harpur, 2012; Peers et al., 2014). The state was seen as complicit in actively disabling specific groups within its population through its policies, ideologies and attitudes that led to the exclusion and dehumanisation of certain people (Oliver, 1986; UPIAS, 1976).

Within the UK social model authors generally refer to disabled people rather than people with impairments or disabilities. A named individual equates to the person, impairment to their functioning and disability to society's barriers (Barnes, 2012; Shakespeare, 2013). Using this terminology, the use of blind people, deaf people or disabled people is advocated. The use of 'people with disabilities' infers the person has the disability. 'Disabled people' is more acceptable as it recognises the role of social oppression. Withers (2012) contends that the rights model of the US is focused on accessing society, whereas the social model of the UK focused on changing society.

### **Disability rights movement preferences.**

Person-first language is also challenged by the growing movement within the disability rights community, with individuals or group claiming the disability, and reframing it as a point of pride. Members of Deaf culture use capitalization to identify and promote a sense of unity and community: when capitalized Deaf refers to a culture, as distinct from deaf, the pathological term (Solomon, 2012). Person-first language is said to subtly imply that there is something fundamentally negative about disability and using terms such as 'with a disability'

(e.g. with diabetes, with vision impairment) needlessly dissociates the disability from the person (Peers et al., 2014).

### **Divergence in language usage.**

There is no international consensus on the most appropriate language for disability, nor is there consensus within countries (Bickford, 2015; Collier, 2012; La Forge, 1991).

Terminology advocated by the UK government (GOV.UK, 2014) include disabled person; blind people, blind and partially sighted people, and the use of non-disabled rather than able-bodied. UK organizations tend not to use person-first language. Within the US, the use of person-first language is generally advocated. It must be noted that person first language was strongly rejected by people who were blind. The US National Federation of the Blind (NFB) adopted a resolution in 1993 condemning people-first language in response to the memorandum in that year from the Office of Civil Rights, US Department of Education requiring the use of terminology such as ‘people who are blind’ or ‘persons with a visual impairment’ rather than ‘blind people’ (Jernigan, 2009). The NFB continues to support straightforward language such as ‘blind person’ rather than ‘person who is blind’ as a way to show respect, and advocates direct language that does not deny the actual disability (Jensen, 2013; Streeter, 2010).

In Australia the trend is to use person-first language. The Government policy statement of guidelines for inclusive education (Tasmanian Government, 2015), endorsed the use of people-first language, stating the general principle is to focus on the person, not the disability. Hence, phrases such as person with disability or student with vision impairment are considered more inclusive and sensitive. Person-first language use is not universal, however, with many Australian institutions using terminology such as blind or vision impaired athletes; blind and vision impaired people and vision impaired children on their web pages (Blind Sports Victoria, 2015; Insight, 2014).

### **The choice of language.**

While only focussing on the UK, US and Australia, this paper highlights the difficulty researchers have in deciding the most appropriate language to use in order to avoid any transgression or offence. Other countries will have their preferred nomenclature. Only by becoming familiar with the language choice of the group under study will researchers and psychologists be able to use the most appropriate language in their writing or discourse. Choices may be restricted, for when writing articles for journals in the US and Australia the

expectation is generally for the use of person-first language, even when participants of the research indicated a preference for direct language.

It remains important that prior to conducting research, consideration is given to the language preference of the participants in a study. Multiple terminologies of disability should be able to coexist, without terminology judged by one model's claim as the universally correct language (Peers et al., 2014). The decision taken for this research has been to write all journal articles in person-first language as this was a common expectation for publications. However, verbatim student quotations were not altered if person first language was not used, as was generally the case. As one participant stated, "I'm a blind person, it's just part of who I am. I'm also a tall person."

## **Structure of thesis**

This thesis including published works commences with Chapter 1, an exegesis. A literature review is presented in Chapter 2 to add understanding to pertinent topics relevant to vision impairment. A detailed account of the research methodology which follows in Chapter 3 allows for an understanding of the choice of methodology, key protagonists and its development and use in this study. A chapter is then devoted to each journal article, from Chapter 4 to Chapter 12. Each article has its own focus, and includes a pertinent literature review that situates the context of each investigative study. Specific participants, methodology and analysis are detailed. Articles cover the effect of schooling on student well-being, the support from teachers and aides, the delivery of the expanded core curriculum, the importance of technology, and consideration of the levels of influence on student development at school. Though numerous issues are revealed in exploring the experiences of schooling for the vision impaired students, there is some unavoidable repetition reported in the articles, emphasising the close interconnection between the individual studies. These connections are discussed between chapters and unify the thesis. The final chapter 13 consists of a discussion and conclusion to link together summation points and critical reflections.

## **Unfolding the thesis**

In the writing of this thesis it was essential to understand the current educational world students with vision impairment contend with during their education. To this end, thorough research into inclusive education, espoused to be operating for the benefit of all students in schools today, was undertaken. There is some research from the perspective of psychologists,

teachers and parents but it is the student views that are lacking. The research focussed on hearing from students themselves, as it was often stated that this was an area of little research but enormous potential for understanding the reality of education for these students. Having taught a student with vision impairment in a mainstream secondary school, it was important for me to look beyond any beliefs I may have had, bracketing any preconceived ideas regarding the education of these students, to properly gain their perspective.

This thesis has revealed rich and detailed accounts of how students with vision impairment are experiencing their education, opening up a world of ‘difference’ perhaps thought to have been erased. The immersion and depth of inquiry necessary for this thesis involved knowledge gathering and understanding of the many facets of vision impairment, education policies and practices both globally and locally, and school learning environments, with each area necessitating substantial literature reviews with which to contextualize and formulate responses to the findings.

The nine journal articles are presented as follows. The first four articles (Chapters 4-7) are single-case studies of each of four participants. They are presented in the order of interviewing, and demonstrate the difficulties related to social inclusion of friendship, belonging, isolation and bullying. The fifth article (Chapter 8) returned to the experiences of the participant in the first study, highlighting issues other than social issues which effected his inclusive schooling. The final four articles (Chapters 9-12) considered the experiences of all seven participants regarding the provision of support; access to technology; delivery of the expanded core curriculum; and the facilitation of technology as provided by the systems noted in Bronfenbrenner’s model.

The first article, “Schooling through the eyes of a student with vision impairment” presented in Chapter 4 used interpretative phenomenological analysis (IPA). The focus of the article was on social difficulties experienced by the participant. This article was published in the peer reviewed *International Journal on School Disaffection*. The study presented one of the four super-ordinate themes arising from this single-case analysis.

The second article presented in Chapter 5, titled “It helps if you are a loud person”: Listening to the voice of a school student with a vision impairment” is a single-case phenomenological study using IPA, and was published in *The Qualitative Report*. In this study, an in-depth account of the experiences of secondary schooling for the student and his personal strategies developed to overcome exclusion when confronted with complex barriers were revealed. The creation of an equal learning environment for the student was not evident, with apparent discrepancies in provision relative to peers.

Chapter 6 presents the article “It is About Listening, about them Listening”: Feedback from a Student with Vision Impairment, the third single-case study under the recurrent theme of friendship, which has been submitted for publication in *Australian Journal of Educational and Developmental Psychology*. It is a phenomenological study filled with the raw emotional experiences of a student with vision impairment exposed to extreme acts of exclusion. It exposes what can result in circumstances where a school environment is not proactive in promoting difference as natural, to be embraced not scorned.

A fourth article presented in Chapter 7 is also a phenomenological study of a single student, demonstrating the impact a single-case study can have on the understanding of a particular area, in this case inclusion for a student with vision impairment. Titled, “Inclusion for a student with vision impairment: ‘They accept me, like as in I am there, but they just won’t talk to me,’” this study gives voice to the student, expanding on the significance of spoken gems in revealing the essence of experiences for the student. It is under review for the journal *The Qualitative Report*.

The single-case study presented in Chapter 8 considers other super-ordinate themes arising from the interview of the student participant in the first study, including access and technology. Titled “Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment” this article was published in the *International Journal on School Disaffection*, and highlighted areas requiring further investigation and action before equity and quality could be achieved for this student.

Chapter 9 presents an article which examines the role of aides and teachers in the educational provision and support afforded to students with vision impairment. A topical subject, this follows extensive research undertaken in the UK regarding the value current deployment of the resource of aides has on supporting an inclusive education. “You have to be like everyone else”: Support for the Inclusion of Secondary School Students with Vision Impairment,” has been published in the journal *Support for Learning*, and reflects on the experiences of the participants in this study with their aides.

“Technology today: Inclusive or exclusionary for students with vision impairment?” presented in Chapter 10 has been accepted for publication in the *International Journal of Disability, Development and Education*. The article considers the provision and use of technology as experienced by the seven participants in the study. A literature review on assistive technology and information technology available and used by students with vision impairment was undertaken and relevant research reviewed. The proficiency of training and understanding regarding the use of technology by teachers and support staff is an area

requiring further investigation in the support of student access to quality and equitable educational experiences.

Chapter 11 presents the article titled “Educating students with vision impairment today: Consideration of the expanded core curriculum” and has been published in the *British Journal of Visual Impairment*. The specific needs of students with vision impairment when educated in mainstream schools are considered. The nine areas that comprise the Expanded Core curriculum (ECC) are recognized internationally as essential areas of competence for these students. The deficient provision of the ECC as demonstrated by the participants and the effect on inclusion is revealed.

The final journal article presented in Chapter 12 looks at the effect of the entire school environment, from global policies, school environment, parents, teachers and peers to the student themselves, and is presented in the article, “The experiences of Australian secondary school students with vision impairment of technology in inclusive settings: An ecological perspective.” The article is under review for the *Australian Journal of Learning Disabilities*. Extensive research into the work of Bronfenbrenner enabled an understanding of the ecological /bioecological perspective of human development and how it can contribute to an assessment of inclusive education.

## **Chapter 2: Literature Review**

Although each individual paper contains a literature review, the following overview presents relevant research literature to contextualise this thesis. The literature review was undertaken to gain as much information as possible regarding research concerning the education of students with vision impairment. Seminal authors in the field and current research were reviewed. The literature review took place not only in the initial stages of the research, but also after data collection as more avenues requiring investigation were indicated. Research studies on inclusive education and academic, social and related school difficulties were primarily presented from the viewpoint of psychologists, teachers, parents, academics and those working in the field. Areas of research included teachers, funding, curriculum, support staff, individual learning plans, challenges specific to students with vision impairment, technology, belonging, self-determination, self-concept and the issue of bullying. These areas were all viewed as significant in effecting the education of participants. The rationale for the study in terms of the gap identified, namely the very limited research undertaken giving students with disabilities a voice regarding their experiences of inclusive education, was confirmed with only a few studies identified.

### **Teachers and inclusive education**

The role of the teacher as a critical determinant in the success or otherwise of the practice of inclusive education is widely acknowledged (Chambers, 2011; Das, Gichuru & Singh, 2013; Forlin, 2010). Many educators have reported serious reservations about their ability to support the inclusive placement of students with disabilities in their classrooms (Cook, 2004; Romero-Contreras, Garcia-Cedillo, Forlin & Lomeli-Hernandez, 2013). The importance of teacher attitudes for the success of inclusive education has been widely recognized (Avramidis & Norwich, 2002; Forlin, Loreman, Sharma & Earle, 2009). Teachers with positive attitudes towards inclusion more readily change and adapt the ways they work in order to benefit students with a range of learning needs (Sharma, Forlin, Loreman & Earle, 2006). The need for teachers to provide learning environments that respond to student diversity is well recognized with instructional adaptations considered as a key to academic success (Guay, Roy, & Valois, 2017; Villa, Thousand, 2016). Teachers should be skilled in differentiated instruction, adjusting and configuring curriculum, and adopting pedagogical methods that satisfy the learning needs all learners (Loreman, Sharma & Forlin, 2013) but

they are challenged in creating an inclusive curriculum, particularly in secondary schools (Van Reusen, Shoho & Barker, 2000). Secondary teachers in particular are challenged by the sheer pace of social and educational change (O'Toole & Burke, 2013) along with inadequate time, training, professional support and an overemphasis on academic results resulting from pressure on schools for their students to gain the best results possible for entry into university courses (Pearce, 2009).

The limited accessible practical advice and training on implementing the Standards for Australian educators regarding the identification of individual needs, development of individual education plans and provision of appropriate support to achieve learning outcomes remains an issue (Department of Education, Employment and Workplace Relations, 2012). The Victorian Auditor-General's Report (2012) noted that although established evidence-based policies and guidelines to enable schools to support students with special learning needs had been established, "many teachers receive little training to support students with special learning needs" and schools and regions are not consistently and effectively administering the guidelines. Teachers' knowledge and understanding significantly affects their ability to provide for all students, as "they must address a wide range of learning needs and complex behavioural issues" for which they receive limited training (p. 21).

Leaders in inclusive education across Australia, in identifying the skills, knowledge and attributes deemed necessary for inclusion, considered empathy as the key attribute which inspired inclusive attitude, with other necessary characteristics including respect, high expectations, dedication, flexibility, eagerness to learn, confidence, effective communication and creative problem-solving skills (Pearce, Gray & Campbell-Evans, 2009). Inclusive teachers were expected to be expert in their subject, have personal knowledge of their students and an understanding of the impact of the disability on all areas of development. Their inclusive teaching required breadth and depth of pedagogical knowledge previously designated as special education, with the capacity to individualise teaching, manage a diverse classroom, and accommodate challenging student behaviours (Pearce, et al., 2009). Inclusive teachers should have contextual knowledge about the community, systemic and school resources they could call upon to support their students and improve their own knowledge and skills. A number of factors would need to be present in order for teachers to fit this profile including specialist training, manageable class size, collaborative planning, differentiation of curriculum strategies and assessment, and resource commitment (Mock & Kauffman, 2002; O'Donoghue & Chalmers, 2000; Prochnow, Kearney & Carroll-Lind, 2000; Zigmond, 2003).

## **Funding for students with disability**

The Nationally Consistent Collection of Data on School Students with Disability (NCCD) (DET, 2017), progressively implemented in Australian schools from 2013 – 2015, collects data about students with disability in Australian schools with funding informed by this information. Data covers which students are being provided with adjustment because of disability, the level of adjustment (supplementary, substantial, extensive), and the broad category of disability under which each student best fits (physical, cognitive, sensory and social/emotional). Data is based on the professional judgement of teachers, although teachers may not be knowledgeable about the various disabilities they encounter. In Australia while the distribution of funding, noted to be \$2.6 billion between 2006 and 2012, occurred for programs for students with disabilities based on their categorization, there was no monitoring of what happened to that money after its disbursement, nor assessment of whether the expenditure had a positive impact on students' educational experiences and outcomes (Slee, 2013; Office of Auditor General Victoria, 2012). The Department of Education and Training, (2016, p. 18) gave a commitment to develop and implement a stronger system of accountability for outcomes for all students with disabilities that includes "improved data quality and data collection, analysis of data, and reporting and transparency." For students, this would include "measures for achievement, engagement and wellbeing" and for schools this would include "greater accountability and transparency" for the use of funds.

## **Curriculum**

According to Barnes (1992) the concept of curriculum theory relates to an interactive model of teaching and learning. The Australian Curriculum Assessment and Reporting Authority (ACARA, 2013) sets consistent national standards to improve learning outcomes for all Australian students, with the secondary curriculum for each subject specifying content and achievement standards. The content of the curriculum includes both knowledge and skills; discipline-based learning areas and general capabilities of knowledge and skills, and it is maintained that these capabilities enable students to develop particular values, dispositions and self-efficacy to become "successful learners, confident and creative individuals and active and informed citizens" (MCEECDYA, 2008, p. 9). The curriculum is a part of a school's teaching and learning program, that extends the knowledge and skills in ways 'that best utilise local resources, expertise and contexts' (VCAA, 2014, p. 5). It is the responsibility of schools and teachers to enable students' access to the curriculum regardless

of specific individual needs. Concerns have been raised regarding the rollout of Australian national assessments plan, (ACARA, 2016) with a literacy and mathematics focus leading to narrowing of the curriculum for students with disabilities (Douglas, McLinden, Robertson, Travers & Smith, 2016).

Specialist vision educators refer to the educational curriculum for students with vision impairments as comprising the core curriculum and the expanded core curriculum (ECC) noting that students with vision impairments must achieve “mastery of an array of disability-specific skills and knowledge in addition to the core curriculum” (SVRC, 2016, p. 1). These include, but are not limited to: braille literacy; adaptive technology training; compensatory skills training; orientation and mobility; independent living skills; social skills; and career counselling (WA. DET, 2010; SVRC, 2016). Given the specialized nature of expanded core curriculum areas, the services of specialist teachers in vision impairment are required (Ravenscroft, 2015).

Teachers need to be familiar with their obligations in providing adequate provisions to enable equity of access and quality in education to students with vision impairment. It is noted that although students may have access to alternative or adapted curriculum, the reporting of outcomes from such alternative curricula is inconsistent and does not necessarily reflect the ‘value’ that students may have gained from their schooling (ARACY, 2013). According to Mitchell (2010, p. 71), “How to measure the educational performance of students with special educational needs with validity and reliability is one of the major contemporary challenges facing educators around the world.”

## **Support staff**

All states and territories of Australia have support services available which include nursing services, occupational therapy, physiotherapy, speech-language pathology, psychology, visiting teachers, special education teachers and aides. Aides are regularly employed to directly support the inclusion of students with vision impairment into mainstream classrooms, (Lewis & McKenzie, 2010; Tews & Lupart, 2008; Webster, Blatchford, Bassett, Brown, Martin & Russell, 2010). Aides may affect the wellbeing of students with vision impairment with their constant proximity leading to the students’ learned helplessness, creating increased dependence on adults, decreasing interactions with peers and have a negative impact on self-esteem (Higgins & Ballard, 2000; Khadka et al.; 2012; Humphrey & Lewis, 2008; Nelson, Rubin & Fox, 2005; Sacks & Wolffe, 1992; Whitburn, 2013). Students assigned paraprofessional support in mainstream classrooms reported it stifled their social inclusion

and generally meant that teachers spent less time engaging with them directly (Gibson, Paatsch & Toe, 2016; Tews & Lupart, 2008). Whitburn (2013, p. 153) found some students considered teacher aides' practices indispensable to their inclusion, but that it was "a delicate balance" of providing appropriate access to support without being prohibitively supportive or becoming over reliant on their services.

The Victorian Auditor-General's Report, 2012 (p. 24) noted "the sole qualification for an integration aide or education support worker is a working with children check" with most principals reporting that they selected aides "based firstly on personality fit" and then experience. Accepting that most teacher aides have no specialist training in teaching for disabilities and many lacked even basic training, a senate inquiry into the education of students with disabilities in 2002 recommended that, within a reasonable period, "all teacher aides should be qualified in special education from an accredited teacher aide training course." The Victorian Auditor-General's Report, 2012 (p. 24) points out, "a decade on, the issue of unqualified aides remains unresolved, compounded by broad role definitions, which in some cases result in aides taking on teaching responsibilities for students with special learning needs."

### **Individual learning plans**

Individual Learning Plans (ILPs) are regarded as one of the most important tools at a school's disposal to record student needs, desired educational outcomes, strategies for support and student outcomes (Victorian Auditor-General's Report, 2012). Unlike the US and UK, Australian Education Standards (2005) do not mandate ILPs for students with a disability although some jurisdictions in Australia use them (Dempsey, 2011). An ILP generally consists of instructional services and accommodations that are tailored to meet the needs of the student, to reviewed and updated annually (Friend & Bursuck, 2009). Adjustments to the standard course of study for each student are to be decided by a team of professionals including the students' parents, case manager, general education teacher, administrator, and specialists, and the student. While ILPs are becoming increasingly popular in some Australian jurisdictions (Australian Curriculum, 2015; Department of Education and Training, Victoria, 2015) they are often poorly implemented, compromised by "inconsistent, inadequate quality" (Victorian Auditor-General's Report, 2012, p. 25) in which educational challenges, achievement aims, strategies and their implementation and effectiveness, and the process of review and amendment were not clarified. The necessity for "new guidelines and

tools to help teachers develop more tailored learning plans” has been acknowledged (DET, 2016, p. 9).

### **Classroom challenges for students with vision impairment**

In school classrooms, the majority of learning, said to be approximately 80 per cent, occurs through vision (Bardin & Lewis, 2008; Khadka et al., 2012; Koutantos & Koutantos, 2000; Murray & Armstrong, 2005; Vision Australia, 2012). Many skills learned incidentally by their sighted peers via modelling remain difficult for students with vision impairment, unable to utilize the visual demonstrations (Brotsky, 2010; Hyvarinen, 2000). Students with visual impairment often miss the subtle, untaught information that provides the basis for understanding key concepts on which general education is based (Murray & Armstrong, 2005). Teachers frequently employ eye contact and facial expression as a means of control and encouragement, and the inability to access this non-verbal communication is challenging for students with vision impairment (Bardin & Lewis, 2008). Resulting gaps in students’ concept development can later affect their ability to infer, predict, comprehend, and create during learning activities (Bardin & Lewis, 2008; Bell, Corn, Jose, Perez, Wall & Wilcox, 2002; Sutherland & Wehby, 2001).

Full participation in classrooms is affected by the need to access print materials, often using alternative methods (Lussenhop & Corn, 2002; McLinden, Douglas, Cobb, Hewett & Ravenscroft, 2016). When using electronic devices time often becomes a limiting factor (Bardin & Lewis, 2008). Reading speeds are generally slower (Gompel, van Bon & Schreuder, 2004), but if students are given enough time, their comprehension is equal to that of their sighted peers (Mohammed & Omar, 2011). Nevertheless, many students with vision impairment are assessed as having lower academic standing than their sighted peers as the extra time needed for these students to produce equivalent work is unavailable. It is asserted there is not enough time in the academic year for teachers to provide the extra time required and to deliver the complete core curriculum (Curtis & Reed, 2011). Visual demands increase significantly as students’ progress in school because of the increased workload and progressive reduction in print size in books and worksheets (Khadka et al., 2012).

### **Subject specific challenges for students with vision impairment**

Students with vision impairment, although cognitively similar to sighted peers, face challenges because subjects such as science, technology and mathematics (STEM) in particular are taught using visuals. When provided with appropriate accommodations,

students with vision impairment master higher-order science concepts as well as their peers (Jones, Minogue, Oppewal, Cook & Broadwell, 2006). Gaining an equitable exposure to STEM subjects is extremely difficult (Bayram, Corlu, Aydin, Ortactepe & Alapala, 2015; Rule, Stefanich, Boody & Peiffer, 2011; Supalo, Isaacson & Lombardi, 2013). Students may be met with stereotypical views of what they can and cannot do influencing instruction (Stefanich & Norman & Egelston-Dodd, 1996; McCarthy, 2005), even though overcoming barriers to experiencing activities that are unfamiliar is seen as critical in stimulating the intellectual growth of students with vision impairment (Kumar, Ramasamy & Stefanich, 2001; Irving, Nti & Johnson, 2007). Education in physical activity can also be problematic, with difficulties exacerbated by lack of appropriate opportunities to participate (Perkins, Columna, Lieberman & Bailey, 2013; Ward, Farnsworth, Babkes-Stellino & Perrett, 2011). Students with vision impairment have been found to be significantly less physically active than their sighted peers (Haegele & Porretta, 2015). Limitations in sport and physical education participation are attributed to lack of training for teachers (Conroy, 2012; van Munster, Weaver, Lieberman & Arndt, 2015). The lack of teacher expertise results in curriculums, activities, and lesson pace that are not conducive to independent participation, their overprotective and discouraging attitudes and fears about student safety, and priority placed on other specialized services or academic subjects rather than physical education (Lieberman, Houston-Wilson & Kozub, 2002; de Schipper, Lieberman & Moody, 2017).

### **Social challenges for students with vision impairment**

Vision impairment in itself does not affect the social functioning of a student, but the lack of experiences and information may affect the knowledge of typical behaviours in their environment (Lieberman, 2017). Students with vision impairment may have difficulty recognizing other people's emotions in communicative situations (Dyck, Farrugia, Shochet & Holmes-Brown 2004). An inability to recognize faces and the lack of visual cues are major factors hampering social involvement and the interaction of students with vision impairment with their fully sighted peers (Cochrane, Lamoureux & Keefe 2008; Crocker & Orr, 1996; Curtis & Reed, 2011; Khadka et al., 2012). Visual information must be explained explicitly (Lieberman, 2017). Students with vision impairment are less likely to initiate and participate in interactions (Agran, Blankenship & Hong 2007; Crocker & Orr, 1996; Sacks & Wolfe, 1992). Social interactions of fitting in, peer acceptance, self-confidence, and communication skills are considered to be vital for students' success throughout their school years. Negative peer attitudes are recognized as a major barrier for successful inclusion with the negativity

resulting in low self-esteem (Cochrane et al., 2008; Lifshitz, Hen & Weisser 2007; Sacks & Wolfe, 1998). Vision impairment is linked with the social disadvantage of having fewer friends (McDougall, DeWit, King, Miller & Killip 2004). Students with vision impairment have greater levels of loneliness and isolation (Hogan, McLellan & Bauman, 2000; Huurre & Aro, 2000; Llewellyn, 2000; Zebehazy & Smith, 2011). Students are more likely than their sighted peers to choose to spend time with adults or in passive or solitary activities (Khadka *et al.*, 2012; Wolfe & Sacks, 1997). As early as preschool, students with vision impairment have difficulty entering social play, yet educators lack evidence-based strategies for remediating this social deficit (Ely, 2014). A certain level of confrontation and betrayal is essential for a healthy friendship (Hartup, 1993). Sighted students spend more leisure time together and experiencing more confrontation and betrayal than students with vision impairment (Lifshitz, Hen & Weisse, 2007), with their lower level of confrontation and betrayal attributed to their fear of losing friends.

### **Orientation and mobility challenges**

Orientation, the ability to know where you are, and mobility, the ability to move safely, efficiently and effectively, contribute not only to confidence in travel, but to socialization, recreation and sport engagement and employment opportunities. Levels of socialisation are affected by students with vision impairment spending more time indoors than their sighted peers (Zebehazy & Smith, 2011). Orientation and mobility in dim light, in unfamiliar places and in crowds are often found challenging as are recreational and sporting activities. Lieberman and McHugh (2001) contend that up to 80 per cent of children with vision impairment do not reach criterion levels of health-related physical fitness, as they often find it difficult to participate together with sighted people due to sensory impairments, psycho-social barriers, and the type of activities available to them (Augestad & Jiang, 2015; de Schipper, Lieberman & Moody, 2017). Students with vision impairment were found to engage in sports when they were motivated and given proper opportunities to participate in activities (Cervantes & Porretta, 2013), but it is maintained that physical education teachers and others lack the knowledge of how best to involve students in physical activity (Lieberman, Ponchillia & Ponchillia, 2013).

Public transport may also pose an issue, as students with vision impairment may be thwarted not only because of the size of timetables at the stops, but because of the difficulty in reading destination information on buses and trams and the inability to recognise when a

particular stop is reached. Such difficulties can result in anxiety (Whitburn, 2014b). Phone apps are making public transport more accessible to students.

Mobility may be attributing to employment difficulties. Ravenscroft (2013) found students with vision impairment, while achieving marginally less academically than their sighted peers, have a significantly higher unemployment rate and contends that part of the problem is the lack of delivery of the mobility and independence curriculum. He contends, “It is not visual impairment ‘per se’ that causes the difficulty; it is the lack of mobility and independent living skills which is limiting independence and employment prospects” (Ravenscroft, 2013, p. 135).

### **Accommodations/adjustments**

Schools may provide accommodations to students such as special equipment, exam accommodations, lighting and seating arrangements, assistive technology and appropriate text options, but many students have difficulties accessing them. Students may shy away from accommodations because they do not want to be singled out as different from their peers (Curtis & Reed, 2011; Griffin-Shirley et al. 2011; Kelly, 2011). Teachers cited time issues as a major factor in not providing many of the accommodations, along with heavy workloads, lack of funding, lack of resources and lack of knowledge (Brown, Packer & Passmore, 2013).

### **Technology**

The increase in available technologies (both assistive and instructive) provides teachers with a range of tools to support students in mainstream classrooms. Assistive technology includes any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities (IDEIA, 2004). Instructional technology (IT) includes computers, virtual reality systems, electronic whiteboards or projectors, coupled with appropriate learning software used by all students in the class to enhance learning experiences (Loeding, 2002; Parsons & Cobb, 2011; Stoner, Beck, Dennis & Parette, 2011). Assistive technology allows students with vision impairment access to physical environments, mobility, communicate effectively, access computers, and enhance functional skills that may otherwise be difficult, although there is evidence that it is underutilized by students because of the lack of adequate knowledge by teachers to provide effective instruction and time restrictions (Griffin-Shirley, Parker, Smith & Zhou, 2011; Bryant,

Bryant, Shih & Seok, 2010; Dalton & Roush, 2010). While the use of IT is found to symbolise competence, belonging and independence, the use of assistive technologies is found to symbolise restriction, difference and dependency, and to fit in as ordinary students assistive technologies may be rejected (Soderstrom & Ytterhus, 2010).

Contemporary students are part of the generation of digital natives (Fleer, 2011; Hsin, Li & Chin-Chung, 2014), living in a world of technologies (Hague & Payton, 2010; Plowman, Stevenson, Stephen & McPake, 2012). There is a growing emphasis on the development of technology-integrated curricula in schools in recognition of technologies changing children's lives and ways of learning, and to connect experiences at home and in school (Mawson, 2003; Plowman, Stevenson, McPake, Stephen & Adey, 2011). Technology used universally is often not accessible to students with vision impairment who are unable to access the computer screen to interpret graphics such as pictures, maps, and drawings. Computer software and web pages are increasingly graphics based, so students with vision impairment require assistive technology to access a computer and the internet (Segers, 2014).

The declining role of special schools for the education of students with vision impairment and their increased placement in mainstream schools has resulted in an increased reliance on VTs to provide expertise in assistive technology (Chambers & Berlach, 2015; Douglas, McLinden, Farrell, Ware, McCall & Pavey 2011). VTs have a key role in ensuring students are suitably equipped with independent access skills to fulfil their potential (Douglas et al., 2011). VTs are often insufficiently trained in using assistive technology devices, which in turn affects their use by students (Kamei-Hannan, Howe, Herrera & Erin, 2012; Safhi, Zhou, Smith & Kelley, 2009; Zhou, Ajuwon, Smith, Griffin-Shirley, Parker & Okungu, 2012). Research reveals that teachers' deficits in assistive technology proficiency negatively impact on students with vision impairment by "stunting the development of assistive technology skills, ultimately resulting in poorer postsecondary education and employment outcomes" (Siu & Morash, 2014, p. 384). Supporting teachers in addressing this critical area of instruction is necessary to close the achievement gap between students with and without disabilities (Parette & Peterson-Karlan, 2007; Peterson-Karlan, Hourcade, Parette, Howard & Wojcik, 2007; Kelly, 2011).

As students are increasingly being called on to produce assignments in multimedia formats which is challenging for students with vision impairment, they require a toolbox of assistive technology at their disposal to use as needed (Segers, 2014). There is a rapidly increasing variety of assistive devices available with over 29,000 assistive technology devices available in 2008, compared to less than 100 in the 1970s (Simpson, McBride,

Spencer, Lowdermilk & Lynch 2009). Low-tech assistive technology includes large print materials and magnifying tools, while more complicated medium-tech devices include tape recorders, talking calculators and visual timers (Evans, Williams & Metcalf; 2010; King-Sears & Evmenova, 2007). Medium-tech devices need basic instruction and are considered useful in an educational setting due to ease of use, and the relatively low cost compared to high-tech assistive devices. Simple computer software that requires minimal training or knowledge to use may also be included as a medium-tech assistive technology. High-tech devices are quite complex and are often specialised to accommodate for a specific impaired function (Bryant, Bryant, Shih & Seok, 2010; Evans, Williams & Metcalf, 2010). These include braille notes, and computer hardware and software such as text-to-speech software, concept-mapping software, subject specific software and voice operated software. High-tech assistive technology requires training for both the student user of the assistive technology, and their teachers and aides. As high-tech devices are not usually repairable on-site, if the device is sent for repair the student may be without the device for an extended period.

Assistive technology allows students with vision impairment to be included in settings which are the least restrictive, allowing choice, which levels the playing field (Loeding, 2002; Kelley, Finley, Koehler & Picard, 2001; Kelly & Smith, 2011). Many assistive techniques are appearing as smartphone applications. From the user perspective, the smartphone is ubiquitous, and with mobile technologies socially valued, students with vision impairment are free of the stigma often associated with the use of assistive technologies (Kagohara et al., 2013; McNaughton & Light, 2013). Advances in product development is ongoing (Terven, Salas & Raducanu, 2014). Selection of assistive technology for students requires consideration of factors including the cost of the device (Borg, Larsson & Östergren, 2011), the availability of the technology (Scherer, 2005), the ability to upgrade the device and the maintenance required (Duhaney & Duhaney, 2000), the extent of training that is required by the student and those assisting the student (King-Sears & Evmenova, 2007), the attitudes of staff to the use of technology (Loeding, 2002; Scherer, 2005), and the physical structure of the classroom (Loeding, 2002; Chambers, 2011).

Training for both the user and the facilitator of assistive technology is essential if it is to be used to its full potential (Smith & Kelley, 2007; Smith, Kelley, Maushak, Griffin-Shirley & Lan, 2009; Simpson, McBride, Spencer, Lowdermilk & Lynch, 2009; Thomas, Barker, Rubin & Dahlmann-Noor, 2015). With research noting the low usage assistive technology, there are concerns that invention and manufacture is unproductive if the technology is not available to students who would benefit from it (Morash & Siu 2016). New

technologies that are widely available to young people, such as mobile phones and portable computers, often have accessibility features for users with vision impairments. Students use the magnifier functions to enlarge text or pictures, and often use these devices to find information more independently. Electronic devices also seem more socially acceptable to students who often fear to ‘stand out’ from their peers when using bulky optical aids (Thomas, Barker, Rubin & Dahlmann-Noor, 2015). Recent research found that assistive technology integration is an ongoing issue for VTs (Morash & Siu 2016). Keeping abreast of assistive technology developments through exchanges with a pro-technology social network is recommended (Wong & Cohen, 2015), as previous and ongoing efforts that focus on preservice training in teacher preparation programs have failed to improve that adoption of assistive technology (Kapperman, Stricken & Heinze, 2002; Kelly, 2009, 2011). With the rapid speed at which new technologies are released and updated, and the limited time and resources available for VTs, developers need to consider not only how students with vision impairment will use their technologies but also how they can be supported, such as by providing forums for users to engage with one another about using the assistive technology (Wong & Cohen 2015).

### **Expanded Core Curriculum**

It is an expectation that the instruction for students with vision impairment include the core curriculum as well as instruction in areas that are directly affected by a child's vision impairment that constitutes the ECC (Sapp & Hatlen, 2010; SVRC, 2016). The ECC is not seen as an optional part of a vision impaired student’s educational program but an essential part that must be taught, compensating for experiences that are typically learned incidentally by sighted children through observing role models visually (Lohmeier, Blankenship & Hatlen, 2009) (See Figure 7, below). The ECC comprises nine areas to be addressed, compensatory or access skills, orientation and mobility skills and concepts, social interaction skills, use of technology and assistive technology, career education, independent living skills, recreational and leisure skills, self-determination skills, and sensory efficiency skills (Kelly, 2015; Lieberman, Haegele, Columna & Conroy 2014; Sapp & Hatlen, 2010).



**Figure 7.** Components of the ECC (Perkins School for the Blind, 2017).

## **Belonging**

Inclusion is about community, meaningful participation and belonging (McLeskley, Rosenberg & Westling, 2010). Acceptance and belonging are reported as central tenets of effective inclusion (Jones, 2005, 2013; McLeskley et al., 2010). According to Shields (2004) when children feel that they belong to a class, they become more engaged and enjoy greater school success. Over the past twenty years considerable research has looked at the concept of belonging. Goodenow (1993a, p. 25) described sense of belonging in educational environments as: “Students’ sense of being accepted, valued, included, and encouraged by others (teacher and peers) in the academic classroom setting and of feeling oneself to be an important part of the life and activity of the class.”

At the individual level belonging involves feeling that one “belongs in a social milieu” (Vallerand, 1997, p. 300), and has been related to the extent to which all “students feel personally accepted, respected, included, and supported by others in the [school] social environment” (Goodenow, 1993b, p. 80). The concept of belongingness is common to many definitions of community (Solomon, Watson, Battistich, Schaps & Delucchi, 1996), a feeling that members have “of belonging ... a feeling that members matter to one another and to the group” (McMillan & Chavis, 1986, p. 9). The significance of community is reflected in the seminal works of Dewey (1958) and Vygotsky (1985), with both viewing education as a social process. Recognizing children's interpersonal needs and the importance of collaborative activities for experiential learning, Dewey promoted the idea that students should

function as a social group. The quality of education, he argued, “is realized in the degree in which individuals form a group” (1958, p. 65). Interaction and collaboration facilitates the development of ideas while helping to develop a better appreciation of others, experiencing themselves as part of a supportive community, and feeling part of a group.

Rather than attention given to the socioemotional needs of students (Hargreaves, Earl & Ryan 1996; Maehr & Midgley, 1996), there has developed a nation-wide emphasis on standardized achievement tests, with academic accomplishment seen as the main priority, particularly in secondary schools. This emphasis on standardized achievement tests remains today, exposing students to ableism, teasing, ostracism, alienation, and other threats to their sense of belonging (Crouch, Keys & McMahon, 2014).

Social interactions with school staff and teachers were found to play an instrumental role in student belonging, with a sense of connection with teachers critical for overall student success. Students feel they belong when teachers treat them fairly (Klem & Connell, 2004), and when teachers were encouraging, supportive and understanding (Doubt & McColl, 2003). Teachers' perceptions of student ability, engagement, and academic performance influence the quality of their relationships with students, as well as influencing the nature of peer relationships, with peer acceptance mirroring teacher attitudes and behaviours (Wentzel & Asher, 1995). Studies show a relationship between teacher preference, peer acceptance, engagement, and academic performance exists from kindergarten through high school, and reveal that peers as well as teachers prefer students who are academically competent and engaged and shun those who are perceived as less capable (Osterman, 2000; Kinderman, 1993; Ladd, 1990).

Many of the changes necessary to satisfy students' needs for belongingness involve changes in the cultural values, norms, policies, and practices that dominate schooling, particularly at the secondary level. Osterman, (2000) found there is little research examining the role of the school in shaping peer relationships and thereby satisfying students' needs for belongingness. Studies assert that inclusion is about community, meaningful participation and belonging (McLeskley, Rosenberg & Westling, 2010). When children feel that they belong to a class, they become more engaged and enjoy greater school success Shields (2004).

### **Self-determination**

Academic achievement, identified as a precursor to social inclusion, economic self-sufficiency, and overall quality of life remains a focus for educational policy and research.

(Day & Newburger, 2002; Greene, 2000; Kutner et al., 2007; O'Neill, 2001). Self-determination has been correlated with positive school engagement, academic improvement and improved adult outcomes (Agran et al., 2005; Arndt, Konrad & Test, 2006; Wehmeyer & Palmer, 2003) and is claimed to determine high aspirations, perseverance in the face of obstacles, recognition of more and varied options for action, learning from failures, and to overall a greater sense of well-being (Wehmeyer & Little 2009). Students with learning disabilities, who report high levels of self-concept and self-determination, are more likely to experience academic engagement and postsecondary success, being more likely to sustain intensive efforts to learn challenging academic content, capitalize on their strengths, and take ownership of their actions (Goldberg, Higgins, Raskind & Herman, 2003; Lackaye & Margalit, 2006; Madaus, 2006a, 2006b; Zheng, Gaumer Erickson, Kingston & Noonan 2014). They are also more likely to be successful in post-school education and work environments (Field, Sarver & Shaw, 2003; Skinner, 2003). Teaching self-determination skills to students, regardless of their personal or environmental characteristics, has the potential to improve students' academic achievement, and the potential to lower dropout rates and lead toward positive post-school outcomes (Zheng et al., 2014). Notably, self-determination is one of the components of the ECC for students with vision impairment (Sapp & Hatlen, 2010).

### **Self-concept**

Self-concept is “the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence” (Purkey, 1988, p. 2). A positive self-concept is important for academic achievement, social and emotional competence, mental health, self-esteem and employment outcomes (Elksnin & Elksnin, 2006; Trautwein, Ludtke, Marsh & Nagy, 2009). Self-concept is considered is a key factor in school success for students with disabilities (Craven, Marsh, & Burnett 2003; Halder & Datta 2012; Hilberg & Tharp, 2002; Kanu, 2002; Swanson, 2003; Lackaye & Margalit, 2006). Compared to their peers without disabilities, lower levels of self-concept were found among students with vision impairment (Cambra & Silvestre, 2003; Datta, 2014), which could be attributed to how they often compared themselves with other sighted peers, and perceived themselves to be different (Datta & Talukdar, 2015). Students with vision impairment often have low physical, moral and personal self-concept and express a level of social avoidance likely to interfere with the formation and sustaining of personal relationships with their non-disabled peers (Datta & Talukdar, 2015; Fitts & Warren, 2003;

Huurre & Aro, 1998; Cambra & Silvestre 2003). Social isolation and perceptions of disability by peers can impact on the self-concept of adolescents with vision impairment (Hatlen, 2004; Kef, 2002), Students who reported high levels of self-concept were more likely to experience academic engagement and postsecondary success and to sustain intensive efforts to learn challenging academic content, capitalize on their strengths, and take ownership of their actions (Goldberg, Higgins, Raskind & Herman, 2003; Lackaye & Margalit, 2006; Madaus, 2006a, 2006b).

## **Bullying**

Bullying is a pervasive and seemingly intractable problem, and research has increasingly informed bullying prevention, policy, and legislative efforts (Dane-Staples, Lieberman, Ratcliff & Rounds, 2013; Espelage, 2016). Students with disabilities are at a greater risk of being victimized than their nondisabled peers (Blake, Lund, Zhou, Kwok & Benz, 2012; Ratcliff, Lieberman, Miller & Pace, 2017). For individuals with vision impairment, being identified as 'different' or 'other' is compounded by the behavioural differences often required for them to operate in their school and social world. The use of braille books, guide dogs or canes, or the presence of an aide separates students with vision impairment from their peers (Dane-Staples, Lieberman, Ratcliff & Rounds, 2013; Scarpa, 2011). Vision impairment encompasses a wide range of ability levels, with each individual facing unique challenges in school of fewer friends and a greater incidence of being teased and neglected than those without disabilities (Lieberman, Robinson & Rollheiser, 2006; Scarpa, 2011; Stuart, Lieberman & Hand, 2006).

Following the pioneering work of Olweus (1978), bullying has been defined as a subcategory of interpersonal aggression characterized by intentionality, repetition, and an imbalance of power. Bullying occurs in many forms including physical bullying, verbal taunts and threats, social-group exclusion including exclusion, humiliation and rumour-spreading, and cyberbullying (Dane-Staples, Lieberman, Ratcliff & Rounds, 2013; Hymel & Swearer, 2015). Whether a student is a bully or a victim is highly dependent on their status (Prinstein & Cillessen, 2003; Farmer, Wike, Alexander, Rodkin & Mehtaji, 2015), with disability linked with low status and victimization (Dane-Staples, Lieberman, Ratcliff & Rounds, 2013). Students with disabilities often have poor social skills, which are linked with peer rejection (Rose, Monda-Amaya & Espelage, 2011). Students who perpetrate bullying (bullies) are distinguished from students who both perpetrate and are victims of harassment (bully victims) and passive non-aggressive victims (Olweus, 1978). Students identified as

'different' due to their disability are consistently placed in the victim role (Rose, Swearer & Espelage, 2012; Piquart. & Pfeiffer, 2011; Swearer, Wang, Maag, Siebecker & Frerichs, 2012). Students are often excluded by their peers owing to their appearance (e.g. nystagmus/rapid eye movement) (DeCarlo, McGwin, Bixler, Wallander & Owsley, 2012; Horwood, Waylen, Herrick, Williams & Wolke, 2005), and for students with vision impairment, their difference is compounded by their need to use assistive technology to operate in the school environment (Scarpa, 2011). A non-aggressive victim will ignore bullying behaviours or passively accept the attacks from peers (Sekol & Farrington, 2010). Non-aggressive victims of bullying may display behavioural vulnerability, suffer from loneliness, isolation, anxiety, and low self-esteem, be avoidant of conflict, and hover on the edge of the peer group (Batsche & Knoff, 1994; Farmer et al., 2015; Fox & Boulton, 2005: Sekol & Farrington, 2010).

Heider (1958) proposed that individuals seek to explain behaviour by attributing the cause either to personal or environmental factors. The Kelley (1973) interpretation of attribution theory described to "explain how people use information to make attributions for the outcomes of others" (Martinko & Thomson, 1998, p. 273), states that by reviewing situations, students will attribute the behaviours of others to their person, a particular stimulus, or a situation. In attribution theory, internal attribution is seen as attributing self-blame, while external attribution blames others (Major, Kaiser & McCoy, 2003). Students in a study by Dane-Staples, Lieberman, Ratcliff and Rounds (2013) articulated internal attributions (self-blame) for their bullying, specifically their vision impairment. Few felt bullied because of external attributions (others being mean, power relationship).

Bullying is recognized as a group phenomenon, occurring in a social context in which various factors serve to promote, maintain, or suppress such behaviour (Olweus, 2001; Rodkin & Hodges, 2003; Swearer & Hymel, 2015). Exclusion is exacerbated by classroom situations with higher levels of bullying and victimization linked to inappropriate teacher responses (Bauman & Del Rio, 2006). Empowerment can be used to mediate the effects of self-stigmatization (Kondrat & Teater, 2009; Espelage & Colbert, 2016), with the teaching of social skills to students with vision impairment viewed as critical, as this "can often mean the difference between social isolation and a satisfying and fulfilling life as an adult" with skills in the area of self-determination important in counteracting bullying (Sapp & Hatlen, 2010, p. 341). With links between bullying and school climate schools need to address their social environment and the broader culture and climate of bullying (Swearer, Espelage, Vaillancourt & Hymel, 2010).

## **Teaching students about disability**

Disability is an often-overlooked form of diversity, and teachers should discuss disability alongside “race, gender, sexual orientation, social class/socioeconomic status, religiosity and aging” (Dunn, 2016, p. 255). People with disability are frequently treated as an invisible minority (Ash & McCarthy, 2003). Students are said to often view a disability as a defining quality that represents the essence of a person, overriding all other qualities (Dunn, Fisher & Beard, 2013), and because disability “looms large in others’ perceptions” (Dunn, 2016, p. 256). Literature concerning nondisabled people’s attitudes toward people with disability consistently show that their attitudes are generally negative (Chan, Livneh, Pruett, Wang & Zheng, 2009; Dunn, 2015; Vilchinsky, Findler & Werner, 2010), resulting in behaviour attributed to supposed personalities rather than to situational influences, such as being late to class seen as lazy rather than the avoidance of crowded corridors. Students’ perceptions of reality are influenced by their expectations, stereotypes, and past experiences (Fiske & Taylor, 2013). A person with a disability is seen and treated as different from nondisabled people, with the perceived difference promoting negative, stereotypic judgments leading to the devaluation of the person with a disability, beliefs that they are somehow deviant, and attempts made to maintain physical and psychological distance from them (Major & Crocker, 1993; Corrigan, 2014). People with disabilities are stigmatized by visible disabilities (eye appearance) or some indicator of the presence of a disability (a cane), which often trigger emotional reactions leading to prejudice and discrimination (Dovidio, Pagano & Hebl, 2011).

To reduce student biases recognition of insider-outsider distinction is considered important (Dunn, 2015; Wright, 1988), with individuals who have a disability (insiders), and nondisabled observers (outsiders) being those who can only imagine what the experience of disability must be like (Dembo 1982). Often outsiders conclude that a disability is negative and disruptive to daily living, and an “ongoing focus, a troubling preoccupation” for the person with disability (Dunn, 2016, p. 257), whereas insiders only focus on their disability when “outsiders or situational constraints make it salient” (Dunn, 2016, p. 258). Ways to help students understand disability have included consciousness-raising exercises, such as covering the eyes of a sighted person to mimic blindness. This is considered an inappropriate way, with such snapshot exercises “lacking integrity, giving participants a quick and false sense of what a disability is like” (Dunn, 2016, p. 257). Nondisabled persons would learn more by shadowing a disabled individual for a meaningful amount of time to learn how the person navigates social, psychological, and physical environments; trying to adopt the

perspectives of others whose experiences differ as a result of their disability; and critically reading narratives written by people with disabilities regarding their experiences, reflecting on insider-outsider distinctions (Dunn & Burcaw, 2013). Students' unfamiliarity with disability is itself a social-psychological challenge, with many well-intentioned nondisabled people uncertain of how to behave when interacting with a person with a disability.

## **Chapter 3: Methodology**

The experiences of secondary students with vision impairment attending mainstream schools was the focus of this study, to ascertain the provision or otherwise of an inclusive education. The study sought students to opt into the study, and seven students interested in participating were interviewed. The extensive in-depth data revealed by participants allowed for significant analysis. Students were all from metropolitan Melbourne schools. Although too extensive for this study, a far greater range of students, including country students and students leaving school prior to completing senior school would add to the research. This study was undertaken in Victoria, where students with vision impairment go to their nearest local state school, or if parents choose to pay, go to private independent schools. They are very often the only student at their school with vision impairment, and as it is such a low incident disability, often they are the only student with vision impairment teachers may encounter.

### **Research methodology**

Research methodologies have variously been classified as objective versus subjective; concerned with the discovery of general laws (nomothetic) versus the uniqueness of each particular situation (idiographic); aimed at prediction and control (quantitative) versus explanation and understanding (qualitative); and as taking an outsider (etic) versus an insider (emic) perspective (Burrell & Morgan, 1979). This section will present an overview of qualitative research and an in-depth explanation of phenomenology as a research methodology. The decision to use Interpretative Phenomenological Analysis (IPA) in exploring experience in terms of the participants' lifeworld is explained. Each journal article also contains specific details of the methodology. As in all research, particularly that which adopts a phenomenological position, the place of the researcher in the study is significant.

### **Research paradigms**

The paradigm and research question determine which methodology and research data collection and analysis methods will be most appropriate for a study (Mackenzie & Knipe, 2006). Silverman (2006) states that methodology identifies a general approach to studying a research topic, whereas the method refers to a specific research technique used. Qualitative researchers are interested in understanding how people make sense of their world and the

experiences they have in it (Merriam, 1998). Qualitative methodologies commonly found in education and considered for this study include grounded theory (Glaser, Strauss & Strutzel, 1968), case study (Merriam, 1998; Stake, 1995; Yin, 2009), descriptive phenomenology (Giorgi, 2012) and interpretative phenomenological analysis (Smith, 2004, 2008; Smith, Flowers & Larkin, 2009). Qualitative inquiry and analysis was selected for this thesis, and phenomenology studied in more detail for its relevance and applicability to this research.

### **Phenomenology and the epoché**

Phenomenology originated as a philosophical movement in the 20<sup>th</sup> century, a movement initiated by Edmund Husserl (1859-1938) aimed at reinstating subjectivity and historicity as core elements of scientific enquiry (Husserl, 1977, 1999). It was a reaction against the objectivist nature of the scientific method which eliminated the subject from research frame and all historical elements while focusing on the object (Cammarata, 2013; Polkinghorne, 2003). Husserl and later phenomenologists held that having removed anything about subjects' lived experience, the scientific method was incapable of revealing how human beings come to know the world. Phenomenologists focus on the meaning of human lived experiences for those who live them, as these experiences are regarded as the fundamental locus of knowledge (Polkinghorne, 1989; Dahlberg, 2006). Phenomenological philosophy holds that experience involves various contents that become 'present to awareness including not only the objects of perception but also those of memory, imagination and feeling' (Polkinghorne, 1989, p. 41). Phenomenological questions are orientated toward meaning asking 'what does this experience mean for those who lived it?' Phenomenologists aim to study and to describe how things and events are for the consciousness that beholds them and not how they are in themselves (Giorgi, 1986). For Husserl, the essence of understanding lived experience involved direct seeing, which "looks beyond constructions, preconceptions, and assumptions to the essences of the experience being investigated" (Gearing, 2004, p. 1430).

Phenomenology evolved into two major schools of thought, descriptive phenomenology associated with Husserl's transcendental phenomenology, and hermeneutics, an interpretive form associated with Heidegger. The principal aim of Husserlian or descriptive phenomenology is to try to generate pure descriptions to answer an epistemological question: what is the nature of human consciousness and human knowledge? How do humans come to know? (Cammarata, 2013). When Husserl joined the Freiburg faculty in 1916, Heidegger (1889-1976) became a junior colleague and was later to be

acknowledged as one of the most original and important philosophers of the 20<sup>th</sup> century. Although valuing Husserl's earlier work Heidegger's redefinition of phenomenology was a reaction against Husserl's call for transcendental consciousness as the key to phenomenological analysis, where one stepped outside and freed oneself momentarily from all prejudices and theoretical knowledge by bracketing one's own previous theories, performing the epoché (Cammarata, 2013). Heidegger argued that fully comprehending the lived experience was, in essence, an interpretative process and that bracketing out preconceptions was neither possible nor desirable (Heidegger, 1962; LeVasseur, 2003). Heidegger adopted the position of being in the world, where contextual interpretation and meaning were sought and valued (Gearing, 2004). For Heidegger (1962) pre-understanding represents a condition for new knowledge since "our understanding of the everyday world is derived from our interpretation of it" (p. 78). Instead of attempting to bracket all forms of understanding or prejudices via the use of the epoché, hermeneutic phenomenologists favour a continuous focus on trying to bring to light those assumptions so that they can become known and accounted for. Gadamer, a former student of Heidegger in and attendee of Husserl's classes, explains

The important thing for an individual trying to understand a text is to be aware of one's own bias so that the text can present itself in all its otherness and thus assert its own truth against one's own fore-meaning. (Gadamer, 1975. p. 269)

### **Phenomenology in research**

Researchers into the lived experiences of others are not engaged in the pure reflections of a philosopher, and by applying the "phenomenological attitude", the process of retaining a wonder and openness to the world while reflexively restraining pre-understandings, in practice convert a philosophical methodology into a practical, empirical one (Finlay, 2008, p. 1.) The phenomenological researcher must be fully involved, interested and open to what may appear while restraining pre-understandings to achieve this openness (Finlay, 2008). Adopting a stance of openness to meet the phenomena in as fresh a way as possible, and paying active, reflective attention towards restraining pre-understandings is using scientific phenomenological reduction, a modified version of Husserl's transcendental reduction/epoché (Giorgi & Giorgi, 2003). Bracketing, the mental attitude of removing the influence/bias of previous knowledge affecting one's impartiality is an important ideal in the art of phenomenological interviewing. Personal feelings, preferences, inclinations, and expectations that may entice premature, hopeful, or one-sided understandings of an

experience, must be put aside, or bracketed in order to come to terms with a phenomenon as it is lived through for the participants (van Manen, 2011).

Bracketing requires a critical self-awareness regarding the assumptions that may prevent being as open as possible to the sense and significance of the phenomenon, including vested interests and preunderstandings. A fundamental openness to the phenomenon is required, with total focus on the experiences as presented, and a commitment to delving deeper for understanding of the significance of these to the participant (Finlay, 2014). The researcher, in striving to achieve the phenomenological attitude, is said to slide between striving for reductive focus and reflexive self-awareness, “dancing between bracketing pre-understandings and exploiting them as a source of insight”, while experiencing “contradictory and paradoxical pulls” of simultaneous detachment from lived experience and involvement in it (Finlay, 2008, p. 29). Naïve openness and self-aware criticality become intertwined – a dialectical dance. When engaged in phenomenological analysis, regardless of the variant of phenomenology, Finlay (2013) identified four key processes: seeing afresh; dwelling; explicating and language.

Seeing afresh is a phenomenological attitude requiring that, “In order to see the world, we must break with our familiar acceptance of it” (Merleau-Ponty, 1962 p. xiv). The phenomenological attitude is a way of seeing with fresh, curious eyes and it is the core element distinguishing phenomenology from other research approaches focused on exploring experience and subjectivity (Finlay 2008, 2013). Giorgi identifies this attitude as being one where the researcher views the phenomenon “freshly” or with what he calls “disciplined naïvete” asserting that when familiar objects are encountered, seeing them through familiar eyes often results in novel features being missed (Giorgi & Giorgi, 2003, p. 249). Theory, explanation, judgements, previous experience and beliefs are temporarily held in abeyance by the researcher, with focus on accepting what participants say about their own experience as their truth, and the meaning of the situation as it is given in the participant’s own experience. Researchers need to be open and fully attentive not objective and disengaged, while continuously managing intrusions of pre-understandings throughout the research. The goal is to move beyond what the participant says of the experience to the implicitly revealed realm (Finlay, 2013).

Immersion, or dwelling in the data, through listening to the recorded interviews and re-reading the transcripts allows for the phenomenon to reveal itself and speak its story into our understanding (von Eckartsberg, 1998). As expressed by Wertz, “When we stop and linger with something, it secretes its sense and its full significance becomes . . . amplified”

(Wertz, 1985, p. 174). By immersion in the data the researcher becomes absorbed in what is being revealed and new understandings emerge; data are transformed into meanings. As von Eckartsberg (1998) explained,

One embeds oneself in the process of getting involved in the text, one begins to discern configurations of meaning, of parts and wholes and their interrelationships, one receives certain messages and glimpses of an unfolding development that beckons to be articulated and related to the total fabric of meaning. (p. 50)

Through immersion in the data, meaning units emerge that are progressively elaborated allowing for deeper understanding, crystallizing and condensing meanings (Finlay, 2013). While variants of phenomenology may have more idiographic intent, “the focus remains on the nature of the phenomenon as a human experience and not on the individual per se” (Finlay, 2014, p. 126). The questions are “what is this experience like?” and “what does it mean to be this individual?” Phenomenological analysis “must stick close to experience, and yet not limit itself to the empirical but restore to each experience the ontological cipher which marks it internally” (Merleau-Ponty, 1964, p. 157).

Explicating is the phase of synthesis and integration, of clarification and revelation, where emergent themes are pulled into larger themes and/or narratives. This eidetic analysis stage involves an extraction of meaning; discovering interrelated elements of the phenomenon, then searching for connections from the data and grouping any general or essential meanings that surface.

For phenomenologists, language is an essential and key process for the development of rich descriptions faithful to the phenomenon that evoke the lived embodied world. Phenomenological research reports tend to demonstrate their scientific rigor and trustworthiness by offering examples and quotations from the data to illustrate points made (Halling, 2002). Examples and quotations make transparent the evidentiary base of any analytical claims. Phenomenological analysis does not seek to emphasize the frequency of themes, explain, theorize or seek to engage higher levels of abstraction. The aim is for rigorous, rich description, backed by illustrative quotations, which evokes the phenomenon in immediate and potent ways, a “focused act of discovering out of silence, sediments of meaning, nuance, and texture” (Finlay 2013, p. 175).

## **Descriptive phenomenology and hermeneutic research approaches: potential application.**

Descriptive and hermeneutic phenomenology are approaches commonly used in psychological research (Langdridge, 2007). Both methods were considered in some detail prior to deciding on the methodology for this research. The aim of descriptive phenomenology is the description of essences of phenomena through eidetic analysis. Giorgi's (2009) scientifically driven descriptive phenomenology analysis procedure has an established set of steps and procedures allowing for findings to be replicated. In contrast to the descriptive phenomenological method, Smith et al. (2009) offer a hermeneutic variant. They present their Interpretative Phenomenological Analysis (IPA) as a systematic, flexible, multidirectional analytic process. IPA focuses on how a given person makes sense of the phenomenon in a given context (Smith, Flower & Larkin, 2009), trying to understand the content and complexity of meaning in respondents' experience (Smith, Jarman & Osborn, 1999). While IPA and descriptive analysis are both linguistically based approaches concerned with the close reading of participants' reports, their rationale is different. While IPA researchers talk to participants and analyse what they say in order to try to learn about how they are making sense of their experience, descriptive analysts examine what participants say to learn about how they are constructing accounts of experience (Smith, Flower & Larkin, 2009).

The focus of both descriptive phenomenological and hermeneutical research is on the experience itself rather than on the individuals who experience it. Both methodologies may challenge common notions by exposing the nature of experiences that might not be well understood or have been misrepresented, highlighting critical issues that need to be addressed. For students with disabilities, in particular students with vision impairment, their actual experience of being immersed in the school world remains to be explored and understood. Typically, students with disability have been counted, analysed, and observed and in this way research has maintained the idea of disability as pathology (Walmsley, 2001).

IPA aims understand and 'give voice' to the concerns of the participants, with an interpretative requirement to conceptualize and 'make sense' of these claims and concerns from a psychological perspective (Larkin, Watts & Clifton, 2006). IPA requires the development of the complex skills of interviewing, analysis, interpretation, and writing, where the degree of skill proficiency influences the quality of the research carried out, more than the conscientious following of procedures. IPA resonated more strongly as the

qualitative methodology to use in the research. This choice reflects a desire to explore in depth the reasons behind students with vision impairment's thoughts, beliefs and behaviours regarding their secondary schooling, as IPA is known to be particularly suitable where an issue is personal and may contribute to an understanding of the area of interest through deeper, more personal individualized analysis (Kay & Kingston, 2002). IPA as an approach is seen as true to the aims of this study, in valuing the experiences of participants and the richness of their accounts. Encouraging students to express their own thoughts, experiences, wishes and fears, and giving ownership of their own stories is essential if we are to understand challenges at play for teachers to develop professionally, and barriers to change for the success of the students (Elliott, 2005; Cammarata, 2013). Only a very few studies in the educational field have investigated student experiences using descriptive phenomenology or hermeneutical research (Whitburn, 2014).

### **Using Interpretative Phenomenological Analysis**

This research is phenomenological in that it focuses on how life is experienced by students with vision impairment. Rather than the focus being on explaining the causes of things, this research aims to provide a description of how things are experienced first-hand by students with vision impairment attending Victorian mainstream secondary schools. It tries to get at the essence of what it means to be vision impaired for these students, and to describe how they see things, how they understand their situation, and how they interpret events as they go about their school life. IPA is phenomenological in attempting to get as close as possible to the personal experience of the participant, idiographic in focussing on the details of the particular case, and is an interpretative endeavour for both participant and researcher (Smith, 2004, 2008). This research aims to use IPA to look in detail at participants' personal lived experience of their schooling and how they make sense of that personal experience. Smith (2011) states that IPA requires an intensive qualitative analysis of detailed personal accounts derived from participants. The intensity of activity for each case means that IPA studies are usually conducted on relatively small sample sizes which are sufficient for the potential of IPA to be realised.

As a phenomenological researcher, I am present to the participant as someone who reports the lived phenomenon under investigation. The aim is to encounter the phenomenon via the person's description, not an attempt to become acquainted with the person in all his/her complexity As Spradley (1979) explained,

I want to understand the world from your point of view. I want to know what you know in the way you know it. I want to understand the meaning of your experience, to walk in your shoes, to feel things as you feel them, to explain things as you explain them. (p. 34)

### **The interview**

In IPA, the most common method of data collection is interviewing. Interviews are audio recorded and transcribed before being subjected to analysis. Semi-structured interviews were undertaken in this research. Such interviews are conversational (Macionis & Plummer, 2005) and going off on tangents is encouraged as it gives insight into what the student/participant sees as relevant and important (Bryman, 2012). According to Seidman (1998, p. 3)

The purpose of in-depth interviewing is not to get answers to questions, nor to test hypotheses, and not to ‘evaluate’ as the term is normally used. At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience.

To gain answers of value it is imperative that researchers carefully and reflexively consider the approach to take, and choose the best questions to ask. It is also necessary to reflect upon the consequences of presuming what a good choice is as participants may hold other understandings. The focus of the research phenomenon must be given the maximum opportunity to show itself ‘as itself’, on its own terms, not according to some preconceived set of assumptions and expectations that must be suspended or bracketed.

The aim from an interview is as complete a description as possible of the experience a participant has lived through. The initial broad interview questions included: can you explain to me as much as possible about your vision impairment, and tell me in as much detail as possible about what primary school was like for you – what are your memories of that time? After a question has been fully explored, further questions should follow the responses of the participant with a focus on the phenomenon being researched, while ensuring the question does not lead the participant, but more directs the participant. Further interview questions might have included: can you tell me about any assistance you have been given to participate in your secondary school programs? What do you consider to be the enablers and the barriers to accessing and participating in subjects such as science and sport? Can you talk to me about your social network and interactions with your peers? A flexible interviewing process allows participants to respond freely (Eatough & Smith, 2006). Open-ended questions allow for

individual variation and for the interviewer to explore and probe within predetermined areas of inquiry (Hoepft, 1997) and these were used throughout.

Interviewing is a craft, and the quality of the information gained in an interview depends on the skills, sensitivity and the subject matter knowledge of the interviewer (Kvale, 1996). As an experienced teacher/counsellor I have had extensive training and practice interviewing many students and adults. Nevertheless, I reviewed my approach with readings of Kvale (1996, 2007), Smith (2008) and others to ensure an approach appropriate for IPA. I made use of techniques such as reflective listening and repeating a word or words to encourage further elaboration of feelings and explanations. Kvale (2007) states that

The interviewer's ability to sense the immediate meaning of an answer, and the horizon of possible meanings that it opens up, is decisive. This, again, requires a knowledge of and interest in the research theme and the human interaction of the interview, as well as familiarity with modes of questioning, in order that the interviewer can devote his or her attention to the interview subject and the interview topic. (p. 60)

Answers were extended through a curious, persistent and critical attitude and through direct questioning of what had just been said. Also, a simple nod, or 'mm', or a pause invited the participant to go on with the description. Repeating significant words of an answer encouraged further elaboration. It was important to listen actively to what the student said, and to refrain from interjecting or joining in on the conversation.

### **The interview processes.**

All students first interviews followed a process similar to the following. The student was thanked for offering to participate in the research, while the following informal chat of a very general nature opened a line of communication. The interview was introduced by briefly reiterating the purpose of the interview, the use of a tape recorder, and items covered in the explanatory statement. The student was asked to sign the consent form if this had not already been forwarded, and asked if there were any questions before starting the interview. I asked permission to use a digital recorder as well as my phone to record the interview, alluding to my lack of faith in technology. This we laughed about, creating a more relaxed atmosphere. The interview commenced by asking for details about the student's vision impairment. The student was given as much time as possible to produce full responses. Prompts were used when needed. Remaining curious and interested tended to encourage students to chat and converse freely. The interview was rounded off with a debriefing, asking if the student would

like to add more, or if they felt we had missed an area they felt we should explore. The tape was turned off while we chatted for a while. If the student offered more information, I asked if we could again record. Following the student's departure, I reflected on what I had learned from the interview, noted down the student's comfort level, body language and demeanor during the interview. The interview, with information about the student's physical expressions accompanying the dialogue, provides a richer access to the subjects' meanings than the just the transcribed texts will do, useful for later. Most participants were interviewed twice of three times.

### **Transcribing.**

Interviews were recorded using a digital recorder which could record without interruption for hours and which provided a high acoustic quality. The recordings were transferred directly to my computer where they could be stored and accessed for later transcription when required. This enabled repeated listening of the words with attention to tone, pauses and content. While interviews are evolving face-to-face conversations, the transcribed conversations become abstracted and fixed into written form. An interview is a live social interaction where the pace of the revelations, the tone of the voice and body language are immediately available to the researcher, but they are not accessible to the reader of the transcript. Converting the tape recording of the interview to an inanimate transcript involves a loss of body language as posture and gestures, as well as the loss of the tone of the voice, the intonations and the breathing. The transcriptions were initially in a verbatim style for the participant, word by word, including word repetitions, 'mh's, and grammatical errors. My own words were abbreviated, and italicized, to make them easily distinguishable from the student's. Where possible, details, such as laughter were noted in parentheses. The emotional aspects of the conversation, such as 'tense voice', 'loudly emphasised' and 'nervous laughter' are recognized as subjective. The accuracy of the transcription was checked by rereading with the recording to check for any discrepancies due to typing or mishearing.

### **Analysis.**

IPA researchers try to understand their participants' world, and to describe "what it is like", recognising that access to "experience" is both partial and complex (Smith, 2008), recognizing that the analytical process cannot ever achieve a genuinely first-person account, as it is always constructed by the participant and researcher. The analysis involves developing the meanings of the interviews, bringing the subjects' own understanding into the

light as well as providing new perspectives. The objective is to develop a more interpretative analysis that positions the initial description in relation to a wider social, cultural and theoretical context. The account aims to provide a critical and conceptual commentary of the participant's personal sense making activities (Smith & Osborne, 2003). This interpretative analysis affords the researcher an opportunity to deal with the data in a more speculative fashion: to think about what it means for the participants to have made these claims, and to have expressed these feelings and concerns in this particular situation (Larkin, Watts and Clifton, 2006). It was decided not to use a computer program in the initial analysis of the transcripts, as I wanted to be as close to the analysis as possible, and become absorbed in the words of each participant.

The complete interview was read through several times to get a sense of the whole. While reading, exploratory notes were made beside each line of the transcript. Coding refers to "the process of breaking down, examining, comparing, conceptualizing and categorizing data" (Strauss & Corbin, 1990, p. 61). Initially a variety of coloured highlighters were used to indicate the different meaning units of the text. Similar coloured meaning units were then grouped together and regrouped until finally themes developed in response to these groupings. Although time consuming it allows for a closeness to the participant's experiences and encourages a thorough examination and reflection. As a form of member checking, a supervisor independently coded the analysis of the transcripts to enable discussion regarding possible alternatives or further coding and rationale of the emergent pivotal themes (Smith & Osborn, 2003). Groupings placed in tentative categories brought to the fore pertinent points of interest. From these, key words and explanatory notes were placed in a table and linked to the original marginal notes on the transcript as a preliminary interpretation. Finally, it was decided on the groupings to prioritize and unrelated matters discarded (Southcott & Joseph, 2015).

The final stage was translating the broad themes into a narrative account. The interpretation of the meaning of interview texts is more than the evident meanings of what is said, and demands a deeper and more critical interpretation, delving beyond what is directly said to determine structures and relations of meaning not immediately apparent. For deep and critical interpretations of meaning, rich and nuanced descriptions in the interviews are valuable, as are critical interpretative questions during the interview. Smith (2011a) refers to the "pivotal role played by single utterances and small passages to the analysis of a research corpus," an extract having a "significance disproportionate to its size", referring to this as a gem. The gem, the small extract which offers powerful illumination of the topic under

investigation was often used as an opening line in the final narratives. An insightful and coherent account evidenced with vivid quotes from the participant/s and some detailed interpretative commentary completed each study. Figure 8, below, summarizes the stages of the analysis process taken in this research.

STAGE	DESCRIPTION
Familiarization of data	<ul style="list-style-type: none"> <li>• Listen to tape numerous times.</li> </ul>
Transcription	<ul style="list-style-type: none"> <li>• Transcribe data, noting down initial ideas.</li> <li>• Check against tapes for accuracy.</li> <li>• Read and reread.</li> </ul>
Coding	<ul style="list-style-type: none"> <li>• Keeping transcript to left hand side of page, make focus/exploratory notes for transcript line by line on right hand side of page.</li> <li>• Review notes and colour code similar meaning units using coloured highlighters.</li> </ul>
Search for themes	<ul style="list-style-type: none"> <li>• Collate similar meaning units (colours) - potential themes.</li> <li>• Review and refine all 'colour' themes, generating thematic 'mind map'.</li> <li>• Create MAXQDA file for line by line analysis and later collation across participants</li> <li>• Compare and discuss independent analysis</li> </ul>
Define and name themes	<ul style="list-style-type: none"> <li>• With ongoing analysis, refine and generate clear definitions and names for super-ordinate themes.</li> </ul>
Produce written report	<ul style="list-style-type: none"> <li>• Select compelling, vivid extracts from participant revelations for each superordinate theme</li> <li>• Identify gems.</li> <li>• Complete final analysis of extracts, relate back to research questions and literature; produce scholarly report of analysis</li> <li>• Assumptions about approach, analysis and researcher position clearly explicated</li> </ul>

**Figure 8.** Summary of the analysis process

### Selection of Participants

For qualitative researchers the critical questions for selection of participants is whether the subject belongs to the population that is being studied and they have the experience that is required. Senior secondary students with vision impairment were the focus of the study.

Guide Dogs Victoria, an association which runs orientation and mobility training for many students with vision impairment, was approached to assist with reaching participants. I was invited to speak at their overnight camps run for students with vision impairment at Melbourne University and Guide Dogs, Kew. After speaking at two Guide Dog camps to students of all ages, participants choosing to opt into the study were from years 12 and 10 only. Guide Dogs Victoria also printed a flyer regarding the study in their newsletters, inviting students to opt into the study. Younger students, although expressing much interest on the camp day, did not make contact to opt into the study. This was not seen as detrimental to the study as it was felt the older students had more experiences to share and could possibly be more articulate and reflective in interviews.

### Details of participants

Seven students opted into this study. James, and Emma were in Year 12 and attended fee paying private schools. They can write quite legibly but need to be 10-15 cm from the page to read. They qualified as vision impaired for funding. The other five were all legally blind. Edward and Steve were both able to write legibly if close to the page. Nick, a Year 10 student cannot write legibly, needs to be very close to work to read, and tires quickly when reading. Alex had attended a state secondary school but was completing his final years of study by distance education because of anxiety. He cannot write, can braille but uses a computer and types his notes, and relies on a cane for mobility. Holly is blind, uses a cane for mobility and a braille note for her work. She cannot write. (See Table 1 below for participant summary).

**Table 1.** Participant summary.

Participant	Year	School	Vision	Mobility aid
James	12	Private	Vision impaired	
Edward	12	Private	Legally blind	
Alex	11/12	State /Home	Legally blind	Cane
Holly	12	State	Legally blind	Cane
Nick	10	Private	Legally blind	
Emma	12	Private	Vision impaired	
Steve	Post Yr. 12	Private	Legally blind	Cane at times

## **Self in the research**

As a secondary mathematics teacher, I became interested in individual differences and to better learn how to reach every child, undertook a Master in Education (Special). I studied both gifted education and the education of students with special needs. Combining teaching mathematics with working in individual differences/education support units, I supported students with varied specific learning disabilities. I became the head of the education support at later schools while continuing to teach mathematics. Although responsible for the support of my school's first blind student, I had no previous experience or training in vision impairment, nor had any staff at the school. My work with this student prompted my research into vision impairment. I was drawn to giving students with vision impairment themselves a voice in the telling of their experiences of education in today's climate of inclusiveness. The need to remain aware of any preconceived notions or ideas resulting from my experiences with vision impaired students was clearly understood, and contentiously attended to using bracketing techniques throughout the research.

## **Bracketing / performing the epoché**

As alluded to earlier, the importance of the epoché, of bracketing preconceived ideas and notions, was a concept which required extensive research and contemplation. The process of bracketing commenced by reflecting on any assumptions, expectations, and hopes for findings I might have held, discussing these with a supervisor, and then considering reflexively how such presuppositions might impact on the research. Bracketing is a mental attitude of removing bias of previous knowledge which may affect impartiality, and aims to ensure personal views do not influence the ability to be completely open and curious to the expressed understandings of the participants as meaning of these experiences are explored. The importance of being genuinely curious and be open to the very real possibility of being surprised by what the participant brings was recognized, with known theories put aside while striving to engage the participant with empathic, compassionate interest. Judgments and opinions needed to be bracketed consciously, while also being reflexively mindful of my own position and perspective given my particular personal, cultural, and historical location (Giorgi, 2009). Ahern (1999) states that there are no single set of methods for undertaking bracketing, but it is accepted as a means of demonstrating the validity of the data collection and analysis process.

## **Important measures for credibility**

### **Authenticity and validity.**

It is an important consideration to have some reason for confidence in the authenticity and validity of the material being collated. Seidman was influential in the choice of undertaking more than one interview for this reason.

On authenticity and validity, Seidman (1998, p. 17) wrote:

The structure of the three interviews, the passage over time which the interviews occur, the internal consistence and possible external consistency of the passages, the syntax, diction and even nonverbal aspects of the passages, and the discovery and sense of learning I get from reading the passage lead me to have confidence in its authenticity.

He also postulated:

The goal of the process is to understand how our participants understand and make meaning of their experience. If the interview structure works to allow them to make sense of themselves as well as to the interviewer, then it has gone a long way toward validity.

It is acknowledged that findings are not pure description but the interpretation of the researcher. This was kept in mind not only while interviewing, selecting questions and prompts, but also in the analysis. Bracketing has been reviewed in some detail.

### **Trustworthiness.**

Trustworthiness refers to the confidence or trust one can have of a study and its findings and is determined by those assessing a study. Trustworthiness strategies such as code-recode and research reflection are used to assist with qualitative rigor and confirmation in analysing the data (Petty, Thomson & Stew, 2012). A qualitative study accepts that variations between people and contexts as well as the passage of time will not enable a study to be replicated elsewhere. This does not mean the findings are not valid (Brinkmann & Kvale, 2009).

The importance of reflexivity (Morrow, 2005) – how my own positions and interests may affect research – is recognized, and an objective was not to skew data in any way. I aim to present findings as represented by the situations rather than be influenced by my prior beliefs, pet theories or biases. Being aware of this possibility safeguards the intention during interviewing to listen, remain curious and reflect. It was noted that validity and quality of IPA research has four broad principles which must be considered: sensitivity to context,

commitment and rigour, transparency and coherence, and impact and importance (Yardley, 2000). The intention was to be attentive to all four.

### **Ethical considerations.**

Ethical considerations reflect a concern for professional treatment of participants and credible collection and representation of data. This understanding motivated my adherence to participant input through an appropriate research design. Respect for the participant and their experiences was an overarching consideration within this study. I was aware of potential sensitivities within the content being shared, and recognised the rights, privacy and dignity of each participant. The factors of honesty, informed consent, avoiding harm and exploitation, and confidentiality of information were all taken into consideration in the collection of data for this study (Stake, 1978).

Valuing and respecting each participant's contribution supported my adherence to accurate and credible collection and use of data. Part of the process of developing questions in qualitative research is being reflective about how the questions will affect participant's lives and how the questions will position the researcher in relation to participants. This ethical aspect of question development is often ignored, but is a central issue when a researcher proposes to study the lives of others, especially marginalized populations (Agee, 2009). This was kept in mind during the research and in question formulation for the semi-structured interviews. How my role as the researcher could affect the study also required careful consideration (Kvale, 1996). This study was conducted through a rigorous framework and with data collection and analysis methods that ensured robust and nuanced findings. I was respectful of the motive of the participants for their involvement: they affirmed their interest in the study due to their hope that findings would improve the future experiences of others with vision impairment.

This study was subject to the ethical approval process through the Monash University Human Research Ethics Committee. Within the ethical clearance process, there was an aim to protect and uphold the rights of all participants. Protective measures were therefore put in place. These included holding the interviews in a location of the participant's choice. Participants were clearly informed of their voluntary status, were notified that they were free to pause or withdraw at any time, and were made aware of counselling available at their school following the interview. This information was also made clear in the written consent form signed by participants. Participants were all provided with a hard copy of their consent form they signed prior to commencement of their interview.

Within this study, privacy and confidentiality of participant information, including data, were maintained. Interviews were recorded on a digital recorder, downloaded following the interview, and transcribed. The audio file was later deleted from the recording device, and transcripts placed in a secure location. Participant anonymity was preserved, with names changed and information such as schools removed. In adherence with participant anonymity, no transcript is included in full in this thesis.

## **Limitations**

While this study used a qualitative approach to investigate the sense of educational inclusion or exclusion for seven students with vision impairment, a range of limitations are noted. The limited study sample and qualitative design impacts transferability, inherently inhibiting the generalisability of findings to the wider teaching profession regarding the inclusion of disabilities (Guest, Bunce & Johnson, 2006). The limitation of a small homogeneous group, however, is actually seen as a strength of IPA, with such studies having important and powerful contributions to make (Smith et al., 2009). With understanding and insights gained through an IPA study, it is possible to draw attention to ideas that may improve support for the social and academic needs of other students with disabilities.

Given that this study involved participant reflections of their secondary schooling, the recollection of particular events is likely to be affected by time. Therefore, the inherent changeableness associated with the recollection of events from the past should be taken into account. The participant experiences in the present study are retold through a retrospective lens, which carries with it the risk that stories are impacted by other experiences, and that they have altered over time. Data are bound to the time and context of the participants' involvement in the study. The priority of this research was to give students with vision impairment themselves the voice to speak about their experiences, showing curiosity and interest in their feelings and their understandings of these experiences, and valuing what they had to say. More extensive data could have been sourced by triangulating the lived experiences of students with other data such as school records, parent information and interviews with teachers and disability support staff. This did occur to a limited extent, and for one student parents were interviewed at their request.

The participants in this study were all from mainstream metropolitan Melbourne schools. Although too extensive for this study, a far greater age-range of secondary students, including students from rural and metropolitan schools, private and state schools as well as students leaving school prior to completing school and students with additional disabilities

would add to the research. Other states and territories could also be included. Importantly, the participants in this study were given the opportunity to share their lived experiences and their perceptions of access to and inclusion in education. The participant sample has provided in-depth and rich lived experiences, and this has enabled deep analysis of content in relation to the phenomenon under investigation.

The study shows the significance of listening to these students, understanding how they experience the world, and the importance of exploring opportunities to assist them in areas they deem important. It is hoped that the findings have some relevance in informing future practice, policy, theory and research towards improving the educational inclusion and learning outcomes for students with vision impairment. A number of recommendations have been proposed which may have helped these students, and further extensive research into the impact these recommendations may have for other students is hoped to be an outcome of this work.

## Chapter 4

### **Schooling through the eyes of a student with vision impairment**

This chapter contains the first of four single-case phenomenological studies using IPA to focus on social experiences of participants. This first study describes the lived experiences of one student with vision impairment and sets the scene for the studies that appear in following chapters. This article gives voice to James and describes schooling that was not inclusive. My participant, James, wanted to be one of the “in” group but was never included by the other students. He ascribed this to his vision impairment, and was quite isolated during his schooling, forming no close friendships. The effect of not having a friend with whom to discuss academic schoolwork has not been widely reported in research, yet the consequences may be considerable in terms of academic disadvantage. Unable to discuss his work with peers, James could not evaluate his commitment to his studies compared to other students. Similarly, teachers were unaware of the extent of his isolation.

James found students he could relate to when he was introduced to activities at Vision Australia. He suddenly encountered people who understood his challenges and he was able to establish his first network of friends. James used Facebook to talk to people which showed a boy with a desire for conversation. James proposed organizing a buddy with vision impairment at the same year level, even if at another school, as a recommendation for future practice.

## **Schooling through the eyes of a student with vision impairment**

Authors:

**Jill Opie**, Monash University, Australia

**Jane Southcott**, Monash University, Australia

### **Abstract**

This article focuses on the school experience of a Year 12 student with vision impairment. Few studies have looked at school experiences from a student's perspective although the belief is that through research focussing on listening to students with disabilities, their perspectives will become part of the solution to provide equity and quality in education. This single case phenomenological study used Interpretative Phenomenological Analysis to give voice to the student. Social issues were identified as one major factor impacting on the student's academic achievement and sense of well-being. This article concludes with proposals from the student to facilitate inclusive practices for future students.

## **Schooling through the eyes of a student with vision impairment**

### **Introduction**

As in other countries, Australia promotes the ‘equal and active participation of all people with disability’ in an inclusive education approach (Australian Research Alliance for Children and Youth, 2013). This study explores the educational experiences of a Year 12 student with a disability, specifically vision impairment. There has been a change in philosophy since the pre-1970s when the majority of students with vision impairments in Australia were educated in special schools (West *et al.*, 2004). A student with vision impairment experiences difficulty with or is unable to accomplish visual tasks even with prescribed corrective lenses. In Australia, there are nearly 4000 school-aged children with vision impairment mostly attending mainstream schools (Forman, 2011; Vision Australia, 2015). Educational equity recognizes that equal treatment is not the same as equal opportunity to learn (de Valenzuela, 2014). A student who is vision impaired yet receives the same textbook as the rest of the class is receiving the same treatment, but not the same opportunity to learn as all other students. Nieto and Bode (2012, p. 9) assert that “all students must be given the real possibility of an equality of outcomes”, which requires recognition of their unique learning needs including differentiated curricula (Boyle *et al.*, 2013, Sharma *et al.*, 2010). Concern was expressed that specialist intervention for students with vision impairment can be inequitable, lacking in quality, scope and outcomes (Australian Blindness Forum, 2008). Understanding the experiences of these learners appears to be critical to any discussion of equity and quality of education.

Despite a shift towards social justice in qualitative research (Lincoln *et al.*, 2011), few studies have been undertaken that explicitly seek to know how young people with vision impairment who attend inclusive educational settings experience and subsequently construct meaning from schooling. There is a need for research that takes into account the voices of young people with disabilities, particularly in educational contexts such as schools (Ainscow, 2005; 2012; Moriña Díez, 2010; Moss, 2012; OECD, 2012; Owens, 2007; Slee, 2011; Whitburn, 2014). It is argued that by listening to students with disabilities, solutions may be found to school practices they perceived as inequitable (Armstrong, 2005; Curtin and Clarke, 2005; Messiou, 2012; Slee, 2011). It is essential to understand the perspectives of students with vision impairments to ascertain where challenges lie (Grima-Farrell *et al.*, 2011). The

impact of gaining an insider perspective is undeniable and for educators to appreciate the nuanced realities of inclusion an explicit effort is necessary (Jones, 2014).

Social interactions are one area in which students with vision impairment encounter difficulties that may impinge on their education. For example, an inability to recognize faces is seen as a major factor hindering social interaction between students with vision impairment and their fully sighted peers (Cochrane *et al.*, 2008; Crocker and Orr, 1996; Curtis and Reed, 2011; Khadka *et al.*, 2012). Students with vision impairment are less likely to initiate and participate in social interactions that involve peer acceptance, self-confidence, and communication skills all of which are considered vital for students' success throughout their schooling (Agran *et al.*, 2007; Sacks and Wolffe, 1992). Negative peer attitudes resulting in low self-esteem are recognized as a major barrier to successful inclusion (Liftshitz *et al.*, 2007; Sacks *et al.*, 1998). Students with vision impairment have greater levels of interpersonal conflict at school, loneliness and isolation, and are more likely to choose to spend free time with adults and in passive or solitary activities (Hogan *et al.*, 2000; Huurre and Aro, 2000; Llewellyn, 2000; Wolffe and Sacks, 1997; Zebehazy and Smith, 2011). For students with vision impairment to realise their full potential, a socially accepting and supportive school environment where students can experience positive interactions with peers, develop meaningful friendships and participate in all types of school activities is essential (Christensen, 1996; Simeonsson *et al.*, 2001). Providing opportunities for greater peer interaction in classroom and school-wide activities is a most effective type of intervention for raising the social status of adolescents with disabilities among their peers without disabilities (George and Duquette, 2006; McDougall *et al.*, 2004; Mpofo, 2003; Whitburn, 2014). Schools need to make changes rather than changing children to fit in (D'Alessio and Watkins, 2009; Goodley and Runswick-Cole, 2011; Lavani, 2012).

### **Methodology**

This research seeks the insider perspectives of a student with vision impairment about his experience in an inclusive educational setting. Since its inception in 1996, Interpretative Phenomenological Analysis (IPA) has rapidly become one of the most commonly used qualitative methodologies in psychology and increasingly in education (Smith, 2011). IPA was chosen as the methodology for this research. IPA has theoretical roots in phenomenology, hermeneutics and idiography and is described as a process of engaging in a double hermeneutic, whereby the researcher is trying to make sense of the participant trying to make sense of what is happening to them (Smith, 1996, 2008, 2011). IPA is idiographic in

its commitment to the detailed examination of the particular case, wanting to know detail what the experience for this person is like (Smith *et al.*, 2009). This commitment may be manifest in the writing up of single case-studies which represent in-depth examinations of the lived experience of a single person (Smith *et al.*, 2009). That a single case study has value is supported by Campbell (1975) as it provides a means of troubling our assumptions, preconceptions and theories. It either disconfirms our expectations, or reveals things that were not expected (Smith *et al.*, 2009). As IPA requires an intensive qualitative analysis of detailed personal accounts derived from a participant, the most common method of data collection is in-depth, semi-structured interviewing. Interviews are audio-recorded and transcribed verbatim before being subjected to analysis. The intensity of activity for each case means that IPA studies are usually conducted on single or relatively small sample sizes (Smith, 2008, 2011). As Smith (1996) stated, IPA believes in a chain of connection between embodied experience, talk about that experience and a participant's making sense of, and emotional reaction to, that experience (Smith 2010). This interpretative analysis affords the researcher an opportunity to deal with the data in a speculative fashion: to think about what it means for the participants to have made these claims, and to have expressed these feelings and concerns in this particular situation (Larkin *et al.*, 2006). The need for the researcher to bracket previous knowledge and assumptions and remaining genuinely open, curious and at the same time critically self-aware and reflexive underpins this approach. Phenomenology is an art of listening to language, and what we hear is not necessarily what is, but what is believed to be or seen as important to the participant. The importance of thought, language and its formation is underlined by Vygotsky who states that, 'The very process of putting experience into language is a meaning-making process. Participants are selecting events and therefore imparting meaning to them' (Seidman, 1998: 12).

### **Method**

This study focused on the understandings of a vision impaired student about his schooling. For confidentiality, he has been given the pseudonym James. Although opting into the study it was impressed upon the student that he was under no obligation to be involved and could withdraw at any time. Although over eighteen years old, permission to take part in this study was sought not only from James but also his parents and his school. Permission was also given by the school to speak with any teachers of the student if they wished to contribute to the study. Again, they were under no obligation to do so but all Year 12 teachers of the student were willing to participate. James attended an academic private boys' school from

Year 7. Unlike students with vision impairment attending schools in Queensland, (Whitburn, 2013) there is no attached education support unit and James was one of only three vision impaired students to attend the school over the past 30 years. He was supported by qualified education support teachers, the school psychologist, and eligible for the funding of a specialist visiting teacher twice a term.

Having gained ethical approval a three-interview approach was followed (Kvale, 1996, 2009; Seidman, 1998; Smith, 2004, 2008; Smith, *et al.*, 2009). Interviews were semi-structured, allowing the participant to discuss his experiences in detail and in his own words (Smith, 2008: 50). The first interview was to establish the context of the participant's experience in relation to schooling. The second allowed the participant to expand on the details of his experience while the third encouraged the participant to reflect on the meaning the experiences held for him. The interviews were carried out over a three-week period. Each was approximately an hour in duration and took place at the school in an office that was familiar to the student. The interviews were voice recorded and later transcribed.

The first stage of interview analysis involved reading and rereading the interview transcripts. Marginal notes were recorded on the transcript reflecting initial impressions. Further readings, coding notes and compiling categories resulted in the identification of emergent themes. As a form of checking a fellow researcher also analysed the transcripts for emergent themes, as recommended by Smith and Osborn (2003). Connections were then made between themes and a summary of pivotal themes created and placed in tentative categories that brought to the fore pertinent points of interest. From these, key words and explanatory notes were placed in a table and linked to the original marginal notes on the transcript as a preliminary interpretation. Finally, the groupings were prioritized (Southcott and Joseph, 2015) and the data were reported thematically, illustrated by direct quotations from the transcripts (Larkin *et al.*, 2006). As Seidman (1998: 99) emphasises 'There is no substitute for total immersion in the data.' A number of themes resulted, one being that of social interaction and belonging.

To contextualise this analysis, relevant documents such as Visiting Teacher reports, State Support Services requests, Ophthalmologist reports and school reports were made available by the Head of the Education Support Unit with the permission of the participant. These documents were studied for information germane to further understanding the student's situation, helping develop an informed overview of the student's engagement with schooling, support and academic progress. A brief survey and short interview with each of James' teachers were carried out.

It is an important consideration, particularly in a single participant study, to have some reason for confidence in the authenticity and trustworthiness of the data. The choice of undertaking three interviews was for this reason (Seidman, 1998: 17). The participant was invited to co-construct and review the analysis, but he preferred to limit his involvement to the interviews. A range of strategies such as code-recode, and research reflection were employed to ensure trustworthy and rigorous data analysis and interpretation (Petty, *et al.*, 2012).

## **Findings**

### **The Experiences of James**

At the time of the interviews James was in his final year of schooling but his statements reflected all of his school years. Although other involving adjustments were identified, a most significant and recurring theme in the data was the formation and maintenance of friendships both at school and outside school.

#### *Friendships at school*

James attributed his difficulties forming and maintaining friendships at school to his vision impairment. Reflecting on his primary years James surmised that the boys he liked in class played sport at recess and lunch. As he could not join in with them he became isolated. James explained ‘friends were very difficult ... what normal boys are into I am just not into as I can’t play sport or contact sports – it is just very hard for me’. He directly attributes his lack of friendship to his vision impairment. His use of the word ‘normal’ to refer to others is powerful as he appears to believe that being different is somehow less normal. He is reflecting what he believes society is telling him. James does align himself with the ‘in-group’ of boys and it is their friendship he seeks, for this is the group he feels he belongs. Even though there were other less sporty boys he did not view them as potential friends. When he was in Preparatory class, James was assigned a Grade 4 mentor. He enjoyed the attention of this student, and reflects that: ‘He was the main source of friendship I had because he wasn’t into sport so much but would chat. When he left I was in grade 3, and so I was back to step one basically where I had to start again’. He reveals his sense of isolation, aloneness and abandonment. He did not mind associating with his non-sporting mentor as there was a degree of kudos associated with being friendly with a more senior student. With the departure of his mentor James developed the strategy of conversing with adults for company. He explained:

Since I didn't play sport the next best thing I guess in the way of socializing and getting conversation going was to go to someone who wasn't busy and not playing sport and that is naturally teachers ... I just started conversations and they seemed to flow and it just seemed to be a very fluent conversation and it worked. It seemed to work, and I thought well, if that worked, why stop and it just continued on. It just snowballed from there.

As an only child James was quite adept at adult conversation, so the interaction with other adults was comfortable. In Year 7 it was noticed by his teachers that James had a maturity in his conversations which may in fact have alienated him a little from his peers. He had a tendency to show a degree of intolerance at the immaturity of other boys. He was quite forward approaching teachers and engaging with them on a more personal level than one would expect from someone his age.

James indicated that it takes time for him to recognize a face, which limits his social interaction. By the time he realizes who someone is the moment has passed and the person has moved on. He identifies this as something that separates him from other students and stated:

If someone comes into the quadrangle at school and says, 'How are you?' I naturally just say 'I'm good, how are you?' not having a clue who it was and a second later I may realize but it's too late; it is that split second that separates me from anybody else.

He described repeatedly missing opportunities to connect and interact and for him this was a source of frustration. Throughout his years of schooling he never developed a strategy to overcome this issue.

After six years at the school, James had no one who he could call a close friend although he could comfortably chat with others. He ate alone at lunchtime, and sought staff out for conversation. Even boys James considered friendly were not inclusive. When asked if he lunched with friends he replied:

They go to a separate area; they go to a certain area of the school that I am not aware of. I may find them just generally walking around and if I do find them I will have a quick chat but it's where they socialize and not where I socialize or eat my lunch for that matter. It's not as if they say 'Hey, I'm having lunch down at the pavilion if you want to have a chat'. They just do their own thing and if I come across them great and if I don't, oh, that's ok.

James has not developed a friendship group with whom he can confidently join and share thoughts and concerns. He has not experienced the ordinary occurrence of lunching together

with mates, nor has he developed social skills that would allow him to be more assertive and self-confident in joining other students. He described a typical lunchtime:

I would most likely go down to the area behind the tuckshop, eat my lunch (ten minutes), and then because there are adults in this area I'd normally talk with them.

Teachers are good for a chat – they seem to put up with me which is a good thing. James refers to teachers tolerating him. This interaction has become an established practice that has positive benefits for him. James' attempts to establish relationships with students at the school have not been successful. He stated that 'I guess I don't go for help when I need it perhaps, and I keep things closed. I am generally able to put on a happy front, and don't let anyone know when I am hurting'. He reveals that things do get him down when he asks 'why was I dealt this [disability]? I belong with them [the group of 'in' boys] It's an up-hill battle and not easy for me. I'm starting behind the eight-ball' and states with a sigh 'I will just have to live with it'. James does not let others, staff or students see any vulnerability. James likes to present himself as confident, independent and possessing a good sense of humour.

### *Friendships outside school*

Although James does not have close friends at school, he has formed friendships through playing Swish socially with other students with vision impairment at Vision Australia. Swish is a fast, invigorating version of table tennis developed in Australia. The game 'allows blind, vision impaired and sighted people to compete on almost equal terms' (Blind Sport Victoria, 2015).<sup>1</sup> This social activity allows James the opportunity of enjoying the company of others in a more equitable setting. James feels that when playing swish with other people with visual impairment he can make real connections and he be open and less guarded about how he feels.

When asked how friendships at Swish compared with those at school, James replied:

---

<sup>1</sup> Swish is like table tennis, but the ball is hit under a net and must travel along the surface of the table. The net is positioned so that those players with various degrees of sight do not have an advantage over blind players. The plastic ball has bells in it to make it audible and it is about the size of a tennis ball. The bat is rectangular with a handle. Swish can be played as singles (two players) or doubles (four players); and is designed for both children and adults (Blind Sports Victoria, 2015).

There is definitely a difference as the kids understand and know what I am going through and I can relate to them. If I say I had trouble on this train line, they say oh, yes, I had trouble on that too a couple of weeks ago and the conversation flows .... It is comfortable and there are other common interests that we share.

It is the feeling of being comfortable sharing things with people with similar experiences that he finds uplifting. He became animated discussing playing the game and the friends he had made. When asked if he does anything socially with them apart for playing Swish, James enthusiastically confirmed that he had recently been invited out 'because as we are all getting older we can go to pubs and I actually got a text message from a friend saying, 'we're going to a pub ... you should come along' and I said 'sure'. It's fantastic. It's really good'. James affirmed this was a real eye opener for him as he had not done anything like this before. He had never been asked to join boys from the school to go out.

In terms of academic work, isolation at school means James is not aware of how much effort other students are making, which is particularly important for the final year examinations. He has not experienced the benefits of working closely with someone, sharing ideas, information and concerns so has no idea of the depth of other student's studies, and gets no peer feedback on his work. When asked if he knew how much work other students in his class did he replied, 'No. I don't go and ask them. I don't go and say how much are you doing at home. That's not the conversation you have in class'. When later asked what he would recommend for future students with vision impairment, he suggested a buddy system, with a student being allocated from Year 7, to share work and increase his awareness of what was going on.

James gets home from school before his parents and immediately goes on Facebook where he finds a captive audience – vision impairment is not an issue. People do not move away. After a pretty silent day at school he loves the opportunity of chatting to people his own age. For James, Facebook:

is a connection to friends. I know where everyone is, they are all there ... waiting to speak to me. ... So, I can just say 'x can I talk to you' and they will respond, and a conversation will just start. It's the finding of friends which is easier.

James wants to interact with his peers, but he needs a forum in which the people are not moving away but are stationary and where he is on an equal footing. He feels he does not have the chance at school for such interactions. James confirms that after school is his time for friendships. When asked whether he thought friendships might be easier at a school for

students with vision impairment he did not think it would have been a better for him. He appears to rationalise his situation, stating:

I've got two worlds. I've got the friends that I know from swish and I've also got the group that are able bodied that I can also relate to. It would have restricted my future endeavours outside of the school in that I would not have been familiar with the able-bodied world if that makes sense whereas here, I am aware of what is open to people. James has a strong sense of self and thinks deeply about his own situation. He has developed strategies for endurance at school. When teachers were asked for their opinions regarding James' social skills and sense of belonging, all referred to his very easy social and articulate style when interacting with them. Teachers thought James had a peer friendship group although acknowledged that he seemed to prefer the company of teachers. They assumed that he would lunch with friends and be included in the external social scene of parties and other events. This was clearly not the case and indicates the teachers' lack of awareness of James' situation, and the ability of James to present this misleading image to staff.

## **Discussion**

During the interviews, James presented as a confident and articulate young man, and was quite at ease talking. He appeared to take his visual impairment in his stride and projected a positive self-image. But, it appears that James felt disappointment and he experienced a sense of loss for what could have been. He wants to be one of the popular boys he believes he would have been if he was not vision impaired. He has developed a public persona that hides his feelings, and he has developed strategies to compensate for a lack of peer companionship, notably a network of teachers. Missing non-verbal communication cues was an ongoing challenge for James and he attributes his inability to immediately recognize faces as hampering his social involvement. James repeatedly showed his sense of humour when discussing his experiences which may have been a defence mechanism. He liked participating in swimming and athletics where no modifications to the curriculum were necessary for him to take part. He enjoyed the camaraderie he experienced and had a strong desire be included when he could participate on equal terms.

The effect of not having a peer with whom to discuss academic schoolwork has not been widely reported in research, yet the consequences may be considerable in terms of academic disadvantage. Unable to discuss his work with peers James could not ascertain time spent on assignments or discuss findings, resources and scheduling. His recommendation of a buddy system reveals an acknowledgement of the difficulty obtaining equity in education

when relevant information may be overlooked. That teachers are unaware of his isolation was confirmed when during our short discussions, a picture of James as having close friends, lunching with friends and being invited to parties and functions, was presented. This reveals his teachers were oblivious to how socially isolated James actually was, and how little academic information James was receiving from his peers. The school has been proactive in advocating various assistive technologies and technology skills, promoting orientation and mobility training and support, and providing work experience placement and career guidance. Despite these efforts, underpinning James' experience of schooling was a sense of isolation both socially and academically, and a desire for friends.

James' most positive friendships developed outside the school with other students with vision impairment. When playing Swish, he found people he could relate to who were overcoming similar challenges. Here he established his first real network of friends. He felt happy and at ease in their company and relief at having others who understand his situation. James' regular use of Facebook to talk to people who cannot walk away and who wanted to talk to him shows a boy with a desire for conversation with peers. James may wish things were different at times, but his resilience is strong and he has developed positive friendships with other students with vision impairment.

## **Conclusion**

This study explores the experiences of a Year 12 student with vision impairment in an academic private boys' school. There is little research based on the individual experiences of students from their own viewpoint. Being a single case study, findings remain pertinent to this individual but some aspects highlighted may be of consequence to other students with vision impairment. The difficulty for teachers when they have had no prior experience teaching a student with vision impairment may lead to unfounded assumptions. The positive effect of social interactions with others with vision impairment and the use of social media for further interactions are evident. The academic disadvantages a lack of social interaction may have, particularly in later years, could prove an important consideration for educators. The school provided extensive support, including experiences in all aspects of the expanded core curriculum (Hatlen *et al.*, 2010; Department of Western Australia, 2010), but neither equity nor quality were successfully realized in James' understanding.

James' experience of schooling could have been markedly improved by comparatively simple strategies. The Visiting Teacher could take a greater role as advocate for the student, ensuring teachers have a greater awareness of social issues and the effect

social isolation may have on academic achievement. Teachers need to be aware that even when students with disabilities are succeeding in their academic work they may need assistance in social interaction. Teachers should not assume that students seek their company due to a personal preference. A buddy system with a student allocated from Year 7 onwards was recommended by James as a means of gaining more educational equity. Organizing a buddy with vision impairment at the same year level, even if at another school, would also be a recommendation for future practice, as here would be someone who may also understand the academic and social issues faced by the student. Encouraging students with vision impairment to interact socially is seen as beneficial. After school activities promoting social inclusion and social competence should be fostered. Teachers should continue to employ teaching strategies that promote positive social outcomes and avoid social isolation when making any curriculum modifications. Sport teachers could include more games and activities in which students with vision impairments can compete on an equal footing. It is also suggested that teacher education both pre-service and in-service should encompass both the academic and the social needs of students with disabilities.

Although this study only concerns one student in one school environment, the results are telling. With greater understanding and insights gained through an IPA study, it is possible to draw attention to ideas that may improve support for the social and academic needs of other students with disabilities. This research argues that a greater awareness and knowledge of the difficulties still faced by students years after inclusion was mandated, is required by teachers and educators. The study shows the significance of listening to these students, understanding how they experience the world, and the importance of exploring opportunities to assist them in areas they deem important.

## References

- Agran, M., Blankenship, K., and Hong, S (2007) 'Promoting the self-determination of students with visual impairments: Reducing the gap between knowledge and practice'. *Journal of Visual Impairment and Blindness*, 101, 452-464.
- Ainscow, M. (2005) 'Developing inclusive education systems: what are the levers for change?' *Journal of Educational Change*, 6, 109–24.

- (2012) ‘Moving knowledge around: strategies for fostering equity within educational systems’. *Journal of Educational Change*, 13(3), 289–310.
- Australian Blindness Forum (ABF) (2008) *Improving life for people who are blind or vision impaired: Education and children’s services*. Online [www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc](http://www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc) (accessed 23 Feb 2015).
- Australian Research Alliance for Children and Youth (2013) *A National Plan for Child and Youth Wellbeing*. Online. [www.aracy.org.au/projects/the-nest/the-nest](http://www.aracy.org.au/projects/the-nest/the-nest) (accessed 2 May 2015).
- Blind Sports Victoria (2015) *Swish*. Online. <http://blindsports.org.au/sports-2/swish/> (accessed 12 April 2015).
- Boyle, C., Topping, K., and Jindal-Snape, D. (2013) ‘Teachers’ attitudes towards inclusion in high schools.’ *Teachers and Teaching*, 19(5) 527-542.
- Campbell, D. T. (1975) ‘Degrees of freedom and the case study’. *Comparative Political Studies*, 8, 178-193.
- Christensen, C. (1996) ‘Disabled, handicapped or disordered: “What’s in a name?”’. In C. Christensen and F. Rizvi (Eds.), *Disability and the Dilemmas of Education and Justice*. Buckingham, UK: Open University Press
- Cochrane, G., Lamoureux, E., and Keeffe, J. (2008) ‘Defining the content for a new quality of life questionnaire for students with low vision (the impact of vision impairment on children: Ivi c)’. *Ophthalmic Epidemiology*, 15(2), 114-120.
- Crocker, A. D., and Orr, R. R. (1996) ‘Social behaviours of children with visual impairments enrolled in preschool programs’. *Exceptional Children*, 62, 451-462.
- Curtin, M. and Clarke, G. (2005) ‘Listening to young people with physical disabilities’ experiences of education’. *International Journal of Disability, Development and Education*, 52 (3), 195–214.
- Curtis, K., and Reed, M. (2011) ‘High school teachers’ perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success’. *Journal of Visual Impairment and Blindness*, 105(9), 548-557.

- D'Alessio, S., and Watkins, A. (2009) 'International comparisons of inclusive policy and practice: Are we talking about the same thing?' *Research in Comparative and International Education Journal*, 4(3), 233-249.
- de Valenzuela, J. S. (2014) 'Sociocultural Views of Learning'. In L. Florian (ed.), *The Sage Handbook of Special Education*. London, UK: Sage Publications.
- Department of Education Western Australia (2010) *The Expanded Core Curriculum*. Online. [det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626](http://det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626) (accessed 15 November 2014).
- Foreman, P. (2011) 'Introducing inclusion in education'. In P. Foreman (ed.), *Inclusion in Action* (3rd ed., 2-34). South Melbourne, VIC, Australia: Cengage.
- George, A. L., and Duquette, C. (2006) 'The psychosocial experiences of a student with low vision'. *Journal of Visual Impairment and Blindness*, 100, 152-163.
- Goodley, D., and Runswick-Cole, K. (2011) 'Problematizing policy: Conceptions of 'child', 'disabled' and 'parents' in social policy in England'. *International Journal of Inclusive Education*, 15(1), 71-85.
- Grima-Farrell, C. R., Bain, A., and McDonagh, S. H. (2011) 'Bridging the research-to-practice gap: A review of the literature focusing on inclusive education'. *Australasian Journal of Special Education*, 35(2), 117-136.
- Hatlen, P., and Sapp, W. (2010) 'The expanded core curriculum: Where we have been, where we are going, and how we can get there'. *Journal of Visual Impairment and Blindness*, 104, 338-348.
- Hogan, A., McLellan, L., and Bauman, A. (2000) 'Health promotion needs of young people with disabilities: A population study'. *Disability and Rehabilitation*, 22, 352-357.
- Huurre, T., and Aro, H. (2000) 'The psychological well-being of Finnish adolescents with visual impairments versus those with chronic conditions and those with no disabilities'. *Journal of Visual Impairment and Blindness*, 94(10), 625-637.
- Jones, P. (2014) *Bringing Insider Perspectives into Inclusive Teacher Learning: Potentials and Challenges for Educational Professionals*. New York, NY: Routledge.
- Khadka, J., Ryan, B., Margrain, T.H., Woodhouse, M. J., and Davies, N. (2012) 'Listening to voices of children with a visual impairment: A focus group study'. *British Journal of Visual Impairment*, 30(3), 182-196.
- Kvale, S. (1996) *Interviews : An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA : Sage Publications.

- (2009) *Interviews : Learning the Craft of Qualitative Research Interviewing*. Los Angeles, CA : Sage Publications.
- Lalvani, P. (2012) 'Privilege, compromise, or social justice: Teachers' conceptualizations of inclusive education'. *Disability and Society*, 28(1), 14-27.
- Larkin, M., Watts, S., and Clifton, E. (2006) 'Giving voice and making sense in interpretative phenomenological analysis'. *Qualitative Research in Psychology*, 3, 102–120.
- Lifshitz, H., Hen, I., and Weisser, I. (2007) 'Self-concept, adjustment to blindness, and quality of friendship among adolescents with visual impairment'. *Journal of Visual Impairment and Blindness*, 101(2), 1-20.
- Llewellyn, A. (2000) 'Perceptions of mainstreaming: A systems approach'. *Developmental Medicine and Child Neurology*, 42, 106-115.
- Lincoln, Y. S., Lynham, S.A. and Guba, E.G (2011) 'Paradigmatic Controversies, Contradictions, and Emerging Confluences, Revisited.' In N. K. Denzin and Y. S. Lincoln (eds), *The Sage Handbook of Qualitative Research*. Los Angeles: Sage
- McDougall, J., DeWit, D. J., King, G., Miller, L. T., and Killip, S. (2004) 'High school-aged youths' attitudes toward their peers with disabilities: The role of school and student interpersonal factors'. *International Journal of Disability, Development and Education*, 51(3), 287-313.
- Messiou, K. (2012) *Confronting Marginalisation in Education: A Framework for Promoting Inclusion*. New York, London: Routledge.
- Moriña Díez, A. (2010) 'School memories of young people with disabilities: an analysis of barriers and aids to inclusion.' *Disability and Society*, 25 (2), 163–75.
- Moss, J. (2012) Curriculum, visuality and educational research. Presented at ROSE Professorial Lecture Series, Deakin University, June.
- Mpofu, E. (2003) 'Enhancing social acceptance of early adolescents with physical disabilities: Effects of role salience, peer interaction, and academic support interventions'. *International Journal of Disability, Development, and Education*, 50, 435-454.
- Nieto, S., and Bode, P. (2012) *Affirming Diversity* (6<sup>th</sup> ed.). Boston, MA: Pearson
- OECD (2012). *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris. Online.  
<http://dx.doi.org.ezproxy.lib.monash.edu.au/10.1787/9789264130852-en>  
(accessed 8 March, 2015).

- Owens, J. (2007) 'Liberating voices through narrative methods: the case for an interpretive research approach'. *Disability & Society*, 22(3), 299-313,
- Petty, N. J., Thomson, O. P., and Stew, G. (2012) 'Ready for a paradigm shift? Part 2: Introducing qualitative research methodologies and methods'. *Manual Therapy*, 17(5), 378-384.
- Ryan, G. W., and Bernard, H. R. (2003) 'Techniques to identify themes'. *Field Methods*, 15(1), 85-109.
- Sacks, S. Z., and Wolffe, K. E. (1992) 'The importance of social skills in the transition process for students with visual impairments'. *Journal of Vocational Rehabilitation*, 2, 46-55.
- (1998) 'Lifestyles of adolescents with visual impairments: An ethnographic analysis'. *Journal of Visual Impairment and Blindness*, 92, 7-17.
- Seidman, I. (1998) *Interviewing as Qualitative Research : A Guide for Researchers in Education and the Social Sciences*. New York : Teachers College Press.
- Sharma, U., Moore, D., Furlonger, B., Smyth King, B., Kaye, L., and Constantinou, O. (2010) 'Forming effective partnerships to facilitate inclusion of students with vision impairments: Perceptions of a regular classroom teacher and an itinerant teacher'. *British Journal of Visual Impairment*, 28(1), 57-67
- Simeonsson, R., Carlson, D., Huntington, G., McMillen, J., and Brent, J. (2001) 'Students with disabilities: a national survey of participation in school activities'. *Disability and Rehabilitation*, 23(2), 49-63.
- Slee, R. (2011) *The Irregular School: Exclusion, Schooling and Inclusive Education*. London, England: Routledge.
- Smith, J.A. (1996) 'Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology'. *Psychology and Health*, 11, 261-271.
- (2004) 'Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology'. *Qualitative Research in Psychology*, 1(1), 39-54.
- (2008). *Qualitative psychology : A Practical Guide to Research Methods*. Los Angeles: Sage.
- (2011) 'Evaluating the contribution of interpretative phenomenological analysis'. *Health Psychology Review* 5(1), 9–27.

- Smith, J., Flowers, P., and Larkin, M. (2009) *Interpretative Phenomenological Analysis: Theory, Method and Research*. Los Angeles: Sage.
- Smith, J. A., and Osborn, M. (2003). Interpretative phenomenology analysis. In J. A. Smith (ed.), *Qualitative psychology: A practical guide to research methods* London: Sage.
- Southcott, J., and Joseph, D. (2015) ‘Singing in La Voce Della Luna Italian women’s choir in Melbourne, Australia’. *International Journal of Music Education*, 33(1), 91-102
- Vision Australia (2012) *Supporting Children who are Blind or have Low Vision*. Online. [www.visionaustralia.org/living-with-low-vision/children's-services\\_](http://www.visionaustralia.org/living-with-low-vision/children's-services_) (accessed 8 January 2015).
- West, J., Houghton, S., Taylor, M., and Ling, P. K. (2004) ‘The perspectives of Singapore secondary school students with vision impairments towards their inclusion in mainstream education’. *Australasian Journal of Special Education*, 28(1), 18-27.
- Whitburn, B. (2013) ‘The dissection of paraprofessional support in inclusive education: ‘You’re in mainstream with a chaperone’’. *Australasian Journal of Special Education*, 37, 147–161.
- (2014) ‘‘A really good teaching strategy’’: Secondary students with vision impairment voice their experiences of inclusive teacher pedagogy’. *British Journal of Visual Impairment*, 32(2), 148-156.
- Wolffe, K., and Sacks, S. Z. (1997) ‘The lifestyles of blind, low vision, and sighted youth: A quantitative comparison’. *Journal of Visual Impairment and Blindness*, 91, 245-257.
- Zebehazy, K. T., and Smith, T. J. (2011) ‘An examination of characteristics related to the social skills of youths with visual impairments’. *Journal of Visual Impairment and Blindness*, 105(2), 84-95.

## Chapter 5

### **“It helps if you are a loud person”:**

#### **Listening to the voice of a school student with a vision impairment**

This second article is the next single-case study. The subject of this study, Edward, was well aware of the expectations of both his parents and of the school that he should do his best. He availed himself of many extra-curricular activities to challenge himself. Unlike James, the subject of the previous study, Edward did not appear to have had undue issues with bullying which may be a result of knowing some of the boys since preparatory class. He has adopted a loud and bold persona as a way to be known as more than “the kid who is vision impaired.” He is unafraid of saying what he thinks to people and unconcerned that this may mean that they may withhold friendship.

While Edward appeared to take his visual impairment in his stride, this may have contained an element of refuting his disability. He appeared to believe that if he adhered to the “norm” he would be more accepted. Edward strongly believed he could be perceived as sighted and thus saw himself as an equal in a sighted community. Like James, Edward did experience exclusion at school. However, Edward’s situation varied in that he had developed strategies he considered useful for not being alone at lunchtimes and for being recognized. He also believed that he was one of the class. Despite his assurances, Edward was isolated and he did not experience an inclusive education in his mainstream setting.

9-7-2017

## “It helps if you are a loud person”: Listening to the Voice of a School Student with a Vision Impairment

Jill Opie

Monash University, Australia, [jill.opie@monash.edu](mailto:jill.opie@monash.edu)

Jane Southcott

Monash University, Australia, [jane.southcott@monash.edu](mailto:jane.southcott@monash.edu)

Joanne Deppeler

Monash University, Australia, [joanne.deppeler@monash.edu](mailto:joanne.deppeler@monash.edu)

Follow this and additional works at: <http://nsuworks.nova.edu/tqr>

 Part of the [Accessibility Commons](#), [Curriculum and Instruction Commons](#), [Educational Psychology Commons](#), [Quantitative Psychology Commons](#), [Secondary Education Commons](#), [Social and Philosophical Foundations of Education Commons](#), and the [Special Education and Teaching Commons](#)

This Article has supplementary content. View the full record on NSUWorks here:

<http://nsuworks.nova.edu/tqr/vol22/iss9/7>

---

### Recommended APA Citation

Opie, J., Southcott, J., & Deppeler, J. (2017). “It helps if you are a loud person”: Listening to the Voice of a School Student with a Vision Impairment. *The Qualitative Report*, 22(9), 2369-2384. Retrieved from <http://nsuworks.nova.edu/tqr/vol22/iss9/7>

This Article is brought to you for free and open access by the The Qualitative Report at NSUWorks. It has been accepted for inclusion in The Qualitative Report by an authorized administrator of NSUWorks. For more information, please contact [nsuworks@nova.edu](mailto:nsuworks@nova.edu).

**“It helps if you are a loud person”:**

**Listening to the voice of a school student with a vision impairment**

**Abstract**

Students with vision impairment who attend mainstream secondary schools in Australia may not experience education as an inclusive and positive experience. This study of one senior secondary student with vision impairment provides a rare opportunity to give voice and provide understandings of the experience from the perspective of the student. The research question that drove this study was: What is the experience of mainstream schooling for a student with a vision impairment? The participant in this Interpretative Phenomenological Analysis study was Edward (pseudonym), a student in his final year of secondary schooling. Edward encountered significant barriers to inclusion, specifically teaching, technology, administrative inflexibility, and restricted social engagement. The participant has become resilient with a strong sense of self and has developed a range of personal strategies to address his challenges. It is evident that Edward was rarely asked about his needs and perceptions, rather decisions were made for and about him by those without a vision impairment. Educators require a clearer understanding of vision impairment and the impact that their often unintentionally exclusionary teaching practices may have on the educational experiences of their students.

**Keywords:** disability, vision impairment, inclusive education, barriers, secondary schooling, interpretative phenomenological analysis, student voice

## Introduction

At the time of writing there are approximately 357,000 Australians who are blind or have vision impairment and it is estimated that by 2030 this number will have risen to 564,000 (Butler, Holloway, Marriott & Goncu, 2016). Australia espouses an inclusive education approach that promotes the “equal and active participation of all people with disability” (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013, p. 6) but hurdles to achieving inclusive education remain (Slee, 2013). UNESCO (2005) defines inclusion as “a dynamic approach of responding positively to pupil diversity and of seeing individual differences not as problems, but as opportunities for enriching learning” (p. 12). Inclusive education programs facilitate and accommodate the curricular, social, and physical needs of all students including those with disabilities (Brown, Packer & Passmore, 2013). It is a tenet of educational equity that equal treatment is not the same as equal opportunity to learn (Artiles & Kozleski, 2016) and the unique learning needs of all students should be recognized (Nieto & Bode, 2012).

Few studies have explored how students with disabilities view the equity and quality of their education (Byrnes & Rickards, 2011; Redgrove, Jewell & Ellison, 2016) and research reporting the views of those with vision impairment is limited (Jessup, Bundy, Broom & Hancock, 2016; Opie & Southcott, 2015, 2016; Thurston, 2014). Although there is no official statistic for the number of school age children with vision impairment in Australia, it is estimated to be around 4000, with a vast majority attending mainstream schools (Media Access, 2016). Decisions about the provision of programs and facilities for students with vision impairment are often made by those who have not experienced vision impairment and it is argued that educational research should seek the voices of young people with disabilities (Ainscow, 2012; Jones, 2014; Moss, 2013). Doing so offers students a sense of empowerment and the opportunity to be included in the decisions that affect their education (Adderley, Hope, Hughes, Jones, Messiou & Shaw, 2015; Messiou, 2012).

Most information received by the brain occurs through the visual (Hyerle, 2009) and often students with vision impairments must learn via alternate media and their other senses

(American Foundation for the Blind, 2016). It is recognised that a long-standing difficulty encountered by students with vision impairment has been in accessing educational materials, including class materials and textbooks. In recent years, the situation should have improved “as materials are increasingly available in electronic format, enabling vision-impaired students to access textual content with adaptive technologies, such as screen or braille readers” (Butler, Holloway, Marriott & Goncu, 2016, p. 1). To participate fully in classes, students need to be able to access print materials but for those with vision impairment this remains difficult, often requiring alternative and often awkward and time-consuming methods (Shinohara & Tenenberg, 2009). Students with a vision impairment may incorrectly appear to have a lower academic ability than their sighted peers because they need (and may not receive) additional time to complete work (Opie & Southcott, 2016). As students progress through their schooling, visual learning demands and overall workload increase significantly (Khadka et al., 2012). Students with vision impairments may experience isolation from their classmates, which limits their potential to consult with their peers regarding work requirements, resources, and a sense of how much effort others are putting into particular tasks (Opie & Southcott, 2015). In developed countries like Australia, schools frequently provide students with vision impairments specialist equipment and assistive technology but this is often under-used by teachers who may lack expertise with both equipment and programs (Brown, Packer & Passmore, 2013; Griffin-Shirley, Parker, Smith & Zhou, 2011). Students with vision impairment may also reject assistive technologies in the belief that it makes them stand out when they would rather fit in with their peers (Thurston, 2014). Alternatively, some students may view the use of technologies as symbolising competence and independence (Soderstrom & Ytterhus, 2010).

Students with vision impairment encounter specific challenges in subjects where educational material is presented in visual formats (Bardin & Lewis, 2008; Supalo, Isaacson & Lombardi, 2013), and in the more visual subjects including science and physical education (Haegele, Zhu & Davis, 2016; Lieberman, Houston-Wilson & Kozub, 2002). Alternative access strategies are needed but not always available, particularly if teachers have stereotypical understandings about students’ abilities (Kumar, Ramasamy & Stefanich,

2001; Rule, Stefanich, Boody & Peiffer, 2011). The experience being a student with a vision impairment who is attending a mainstream secondary school in Australia may not be an inclusive and positive experience. This study provides a rare opportunity to give voice and provide understandings of the experience from the perspective of one senior secondary student with vision impairment. The research question that drove this study was: What is the experience of mainstream schooling for a student with a vision impairment?

### **Methods**

This interpretative phenomenological single participant study explores the retrospective insider understandings of a student with vision impairment about his schooling. It has long been recognised that “one good case can illuminate the working of a social system” (Gluckman, 1961, p. 9) and this research explores the case of one senior secondary student with vision impairment. Rigorous single-subject research may reveal the unexpected and offer evidence and advice for educational practice (Horner, Carr, Halle, McGee, Odom & Wolery, 2005; Smith, Flowers & Larkin, 2009). Foundational to this study is a phenomenological understanding that reality for our participant is subjective, perceptual and constructed (Oleson, 1990). We selected interpretative phenomenological analysis (IPA) because it is concerned with how an individual understands his or her life-world within a specific context (Larkin, Watts & Clifton, 2006; Smith, 2011) and through “telling their own stories in their own words” (Reid, Flowers & Larkin, 2005, p. 18). IPA researchers offer “an interpretative account of what it means for the participant to have such concerns within their particular context” (Larkin et al., 2006, p. 113) and in relation to wider social, cultural, and theoretical contexts. This approach develops “rich descriptions of how individuals think and feel about the challenges they face” (Smith, Brewer, Eatough, Stanley, Glendinning & Quarrell, 2006, p. 487).

Ethical approval was gained from our university to undertake this research. We sought potential participants from Guide Dogs Victoria via their newsletter seeking any student attending a mainstream secondary school who was interested in opting into our

study. Guide Dogs provide mobility instruction to students with vision impairment and advise their schools about access issues. Our participant, given the pseudonym Edward responded to this information and author Opie arranged to meet with him at a mutually convenient time and place. The first two interviews were completed at his school and the third interview was at a café as Edward had completed his schooling. At the time of the first interview Edward was 18 years old but by the time of the third interview, he was 19. Data were gathered via semi-structured interviews that allowed Edward to discuss his experiences and understandings in detail (Larkin et al., 2006). The first interview established rapport with the participant and asked about his experience of schooling. The second asked him to delve deeper into his experiences and the third encouraged him to reflect on the meaning the experiences held (Kvale, 2009; Seidman, 1998). The interviews were audio recorded and then transcribed by author Opie. The participant was offered the opportunity to confirm the audio recordings but declined.

The interview data were initially coded independently by researchers Opie and Southcott. Independent analysis of the same transcripts has the potential to increase trustworthiness and reach thematic consensus (Rodham, Fox & Doran, 2015). We each read and re-read the transcripts and then made marginal coding notes that recorded initial impressions. From this coding, emergent themes were identified (Southcott and Joseph, 2015). At this point the we met together to negotiate shared understanding of the data. Next, the authors jointly discussed the emergent themes and then grouped them into broader categories that were hierarchically prioritised; unrelated matters were discarded and overarching themes generated. Throughout the research we bracketed prior understandings and assumptions, and adopted an open, curious and simultaneously critically self-aware position (Finlay, 2013; Tufford & Newman, 2010). In this process reflexivity is intertwined with bracketing and “in this process, something of a dance occurs [in which] researchers must wage a continuous, iterative struggle to become aware of, and then manage, pre-understandings and habitualities that inevitably linger” (Finlay, 2008, p. 1). An outcome of this ‘dance’ can be heightened understanding and unanticipated revelation. After reaching

consensus, the writing began. Direct quotations are included to present the participant's voice (Pringle, Drummond, McLafferty & Hendrey, 2011).

## **Results**

### **The Participant**

Edward was selected for this study because he volunteered to be involved and talk to us about his experience of living with vision impairment. He was born with bilateral coloboma (a hole in one of the structures of the eye). He has no vision in his right eye, his left is poor and he has nystagmus (involuntary eye movement). Visual fatigue increases his nystagmus, reduces his visual acuity and increases the likelihood of headaches. Edward explained that his mother chose his school because he would only need to attend one campus for his thirteen years of schooling. Our understanding of Edward was informed by documents shared with us by his school's Head of the Education Support Unit (HoES). These included school reports, ophthalmologist reports, Guide Dog Victoria and Visiting Teacher (VT) reports, and examination entitlements. Edward reads books/worksheets with his body bent over and head tilted closely to the page. Edward was happy for us to have this information and to talk briefly with his HoES. We did this to gather background information, recording and transcribing the discussion.

The HoES explained that the VT provided Edward access to special resources including large print and electronic texts/materials, and assisted him with organizing work. The VT spoke to Edward's teachers at the beginning of the school year and provided some notes regarding his access requirements for print and graphics, lighting needs, social skills, adaptive technology and test and exam provisions. Edward was proactive regarding his requirements. He explained that each year he addressed the teachers to explain what he could and could not do, for example he preferred all written work enlarged to Arial 18. The HoES felt that because Edward presents so well "for the most part ... you forget that Edward is even there with a disability." Edward used the Mimio (a portable tool which is

mounted to a whiteboard and allows notes and drawings to be saved directly onto a computer) throughout his schooling even though it was old technology.

Guide Dogs Victoria advised the school about safety measures and assisted Edward so that he could negotiate his way around the school with confidence, and travel safely and independently in familiar or unfamiliar environments. Concerning mobility, the HoES recalled that,

When I first met him ... he comes flying down, without falling. I'm talking running down the stairs, quicker than a lot of the other kids, in this tiny dark little staircase area then running off in another direction and I thought ok, you're going to be ok.

Edward commented that, "I learnt very early how to move quite quickly, I can run around. Worst case scenario you run into the wall and laugh at yourself. A sense of humour always helps." Edward's statement reveals he has no restricting fear of hurting himself, and it was clear to researcher Opie during the interview that he moves with sureness and confidence.

The HoES said that socially "Edward always put himself out there. Kids respected his humour and respected the fact that he could always come up with an answer, even if it was something quite out of left field." She described his social interaction with the other students and teachers, stating "he was not alone at lunchtimes. He was never one we had to worry about. He was a full participant in every imaginable aspect of the school, except for sport." From Year 9, whenever sport was timetabled, Edward attended Education Support. The HoES thought that "he could not participate much as they mostly do ball games and he cannot play ball games of course." Edward summed up the situation:

I wasn't too prepared to put much effort or interest into the PE department and strangely enough they weren't prepared to put too much interest and effort into me and we seemed to get along just fine under that understanding.

His involvement in physical education remained at an impasse except when he did rowing in summer.

## **Edward's Experience**

Edward's experiences and understandings are presented under four headings: Edward's view of himself; Support received; Engaging with technology; and Forming and maintaining social relationships. Each of these explores different facets of Edward's understanding of his experience of mainstream schooling.

### **Edward's view of himself.**

To the interviewer (Jill Opie) Edward presented as a confident and articulate young man. Opie was impressed by his self-assurance and strong sense of self. He was chatty, amusing and talked easily throughout. He was knowledgeable about his condition. The first question asked was about his preference about how he wanted to be described:

Interviewer: Do you consider yourself to be a person with a vision impairment or a vision impaired person?

Edward: It doesn't super bother me. I guess probably I prefer the vision impaired thing be more as an afterthought or a footnote.

Edward wanted to be accepted as if he were "just one of the boys". His aim was to appear as "one of the normal crowd", and he believes that he "projects" being sighted. He stated that, "If I really want to I can reasonably fake full-sightedness." He continued, "To a very unobservant person, I would say I have enough vision to pass as a sighted person most of the time. The second they ask me to read something, though ..." He laughed, fully aware of how his limitations would become quite obvious.

Edward thinks that he has strength of character, and explained that "it helps if you are a loud person. You make sure you have bit more of a persona." He reflected that it may have made him "a bit more of an abrasive person" who is "not afraid to stand up to anybody really" and laughingly added "there are very few people left around that don't have a very solid idea of what my opinion of them is. Perhaps that's a problem." He asserted that he is not intimidated by others, nor afraid of openly giving his opinion but it is possible that by not noticing visual cues, he misses the effect he has on others.

Edward projected a confidence in doing things that may not be supported by his actions. He stated that public transport “has not really been a big thing ... I will use it if I really have to” but he was driven to and from school every day, relying on his mother to drive him about. Public transport is available but he hoped her driving will continue when he is at university until he can find another student to drive him. His understated reliance on his parents was apparent, but it seems that Edward saw it as his choice rather than a reflection of lack of confidence or ability.

When asked what he found to be the biggest negative of having a vision impairment, Edward emphatically replied,

I won't be able to drive a car – if I had to pick out one thing that really stands out that would be it. That being said though, driverless cars are going to happen very quickly, and to paraphrase the Prime Minister, there has never been a more exciting time to be a vision impaired person [Laughs].

His desire for a driverless car may reflect his wish for greater independence and self-sufficiency. He reflected on his disability that, “for me it is just not really an issue ... you get dealt the cards you get dealt and you can either sit there and whinge about it and not do anything or just work with it.”

Edward's confidence in his ability to achieve was also evident. Regarding subject choices for year 12, he asserted that, “I chose the subjects pretty much on what my passions were, not on what best suited because of my vision impairment.” He was in no doubt about his ability to succeed academically, completing a Victorian Certificate of Education unit most successfully a year early in Year 11. His aspirations were high, aiming for a commerce-arts degree at a prestigious university which would require a high entry score. He concluded, “I have been able to stand on my own two feet. From a very young age my vision has not really been seen as a key thing but just going about life as normal.”

### **Support Received.**

Edward spoke about the support he has received from external agencies and from his school. He considered support from some agencies less than desirable after attending a state-run facility that provides resources and events for students with vision impairment:

I only went once and didn't ever go again because, and this is probably going to be quite a controversial statement, but I thought a lot of people running it had a lot of trouble distinguishing between the idea of a vision impairment and a mental impairment to be perfectly blunt. I can't see properly but I can think perfectly well thank you!

Having made a decision, he never attended again.

Edward thought that the support he received from VTs was “very hit and miss ... some have very set ideas of how you are going to cope with vision impairment, what technologies you're going to use, even down to what type of pen you are going to write with!” Edward believed that the VTs felt that they knew what was best for him, even though they were not themselves vision impaired. He felt that to justify their role VTs needed him to not cope in some way.

I guess the fact that I was coping, to be brutally honest, was the issue, 'cos they have trouble – I don't really know why. I don't really know what the justification in their head is – they just don't see the possibility that you are really coping, and that is so annoying.

He did not recall being asked what he wanted very often, rather he was told what he should do or use. He recalled an instance when the VT comment that I did “an awful lot of extracurricular stuff ... and really, seriously need to cut back on everything I do, extra.” He continued, “Out of sheer determinedness I have pretty much done everything, just sort of making a point. Yeah well, guess what! I can!” Edward presented as defiant and determined to do as he wants, and exuded the confidence that he knows what is best. Edward recognised

that VTs could have helped him with touch typing but this did not happen. He also pointed out that they failed to keep him updated with the latest technology.

Edward made positive statements about the school's support, but it appears that it could have been more effective as some issues were avoided rather than addressed. Although teachers were made aware of Edward's need for worksheets and printed material to be in Arial 18, teachers routinely forgot. He explained that,

Generally, everyone was obsessed with blowing things up to A3 which is not a very workable option. You end up with unmanageable A3 sheets and to find stuff is just impossible. By the time you get to the end of the year you just have a pile of paper and I swear I have thrown out a good forest's worth. It is just ridiculous. I am sure one day I will make a chiropractor very, very wealthy.

Again, Edward revealed his sense of humour. He was not happy with the situation but did not dwell on it nor apportion blame. He stated that some teachers were 'chronic' in forgetting even to enlarge notes to A3 which "was annoying if you had to go down to the photocopying room to get things blown up, which was probably done in excess of 5000 times!" This meant missing class time. When asked why he thought teachers did not prepare better, he replied "I guess it seemed to be a massive imposition."

When asked about the use of enlarged texts he expounded,

I have had giant text books. Bigger than A4 with enlarged text. Entire texts are huge. You need a second locker to store them. A maths text may come in ten volumes! Apart from the weight issue, they are hard to work with on a desk so I generally sit alone.

The texts and technologies that he used restricted his ability to socialize in class.

Edward's favourite teachers were into technology, often presenting their material using different formats such as PowerPoint or Publisher, which he could easily access. He described the teacher who best catered to his vision impairment, "a really clever woman and

on top of all that she was always really organized. She always had everything ready for class blown up.” He added, “Another teacher was also good, not as reliable but ... everything she presented was in these immaculate PowerPoint presentations which I could access.” Edward was well aware that he could have done more to make his work easier. He explained that,

I am a slow touch typist, not as fast as I probably should be because I am lazy. But I enjoy hand writing, a dying art, and I enjoy it. [Laughing] I do take notes.

Everything on the board is just reiterating what is said so you are able to catch most of it just by ear. Some of my shorthand is quite appalling, but I can get it down and I can read my own hand writing. I think my good memory maybe has helped.

Generally, I have been able to bluff my way through most things.

Reading and vision fatigue could also be problematic. Edward recalled that,

Recently I was in the drama so I was up late and I also had a 3000-word SAC [School Assessed Coursework requirement] to do. The next week everything came crushing down. I do have nystagmus which becomes quite pronounced when I have done too much. This happened. I get headaches etc. I have to deal with it by sleeping really, it’s the only way, just sleep.

### **Engaging with Technology.**

Edward has benefitted from the school’s willingness to try various options for accessing work in the classroom but there was no one overseeing the introduction of new technologies. In Grade 1 he was introduced to a “device called the Mimio, which attaches to the board, and using infra-red pens captures what is on the board so you can see it on your computer screen.” He has persevered with the Mimio but acknowledges its limitations as it takes time to set up, the device often slides down the board, and both the pens and the batteries run out. Edward was encouraged to file the images captured from Mimio in topics, to transcribe or type up notes from the images, and maintain a workbook of notes for each subject. Edward admitted that he does not do this because it took too much time and “was like doing a class

over again.” Edward thought that mathematics had been the most difficult subject to access because it was “very much based on watching the board and watching the examples being solved in the ‘there and then’.” Edward has used the Mimio throughout his schooling although other technologies might have been available. He feels that he is managing but could be more organized.

Edward only started using an iPad in his final school year. This was his own initiative. He explained that

We got it for mum to use then we realized that it had lots of really good applications for school and was really, really helpful. I have bought the eBooks for literature rather than the actual books, and there is an application that allows me to highlight and add a sticky note so you can just write all your notes. I can make technology work for me and use it quite easily.

By using the iPad Edward gained greater independence in accessing information. He only needed to carry his iPad and notebook instead of a heavy bag of equipment. Edward could have been introduced to this technology much earlier by the school or VT. When asked who was his go-to person for technology he replied, “to be perfectly honest I keep my eye on what goes on myself and decide what works for me.” Because of his relatively poor typing skills, Edward prefers to write in examinations, and was granted generous extra time allowances but this was problematic, as trying to read and write for six hours puts strain on his eyes. For him to compete more equitably his word processing skills should have been a priority. He was not introduced to voice activation software.

### **Forming and Maintaining Social relationships.**

Edward justified sitting alone at the front of the class because the equipment and enlarged texts take up space. He explained that, “I am one of those people that chronically sit up at the front of the room which is for some reason not the most popular place in the world.” Although unable to read from the board he sits at the front, knowing that this is an isolating

position. He acknowledged that the proximity of the teacher may be a contributing factor. He admitted that he did at times feel isolated.

Edward named two boys he considered friends, Luke and John, who went through Junior school with him. Luke and Edward “really enjoy talking about politics, like literature and we are both in the debating team.” Edward only sees Luke socially “during the holidays maybe as we see each other at school during the term.” If Edward has academic concerns, he is “pretty organized for that sort of stuff but generally if I needed to talk to someone, then with John.” Concerning friends outside of school, Edward explained that “I generally chat with people on Facebook.” He added “I realize now that my friendship group is really small.” When asked about parties, Edward responded that, “I definitely have not been to as many as a lot of people in my year group but that is probably more for the fact that the people I am friendly with were bit more of a quiet bunch.” In fact, he could not recall being invited to any party.

Edward did not mention feeling lonely at school as he kept himself busy with numerous extra-curricular activities such as the choir, drama and debating at lunchtimes, thus ensuring that he was not alone at these times. He has also been a member of the school cadets, attended school camps and went with the school on an overseas trip to NASA. There was another student with a vision impairment and a slight cerebral palsy at Edward’s school but he did not want to socialise with him. He explained,

I didn’t feel the need to get to know him, but he did seem to have the need to know me. It is an interesting idea why I didn’t but I think it was a personality thing. I didn’t feel I needed his company.

Edward recounted once attending a support skills program for students with vision impairment at an external agency. He said that, “It was a good day and you got to meet a whole heap of other vision impaired people from across the state ... you got to play swish [modified table tennis], which is fun. He “really enjoyed having contact with other vision

impaired people” but refused to attend similar functions after the unsatisfactory event described earlier.

When asked to reflect on whether he felt the school had been fair and inclusive, Edward was measured in his response:

The school has, to the best of the ability that can be done, made it fair for me. Has the school be able to make it totally equal? I don't really know. I couldn't really say. Because at the end of the day you can never really say what my life would have been like if I were fully sighted you know and all the flow-ons from that. I am able to hold my own against the rest of my cohort so I figure that you know, it must be doing something right. I guess I am very privileged to go to a very well-resourced school. I did everything there.

### **Discussion and Conclusion**

Edward had a clear understanding of his vision impairment. He could explain the effects of his condition and the accommodations required in the classroom and at school. Through his narratives and our interpretation, we have generated a fine-grained, interpretative account. To further this, we have selected theories of self-esteem to offer a theoretical perspective. Doing so is within the tenets of IPA (Pietkiewicz & Smith, 2012). We did not begin this study from a theoretical stance, rather meaning is generated inductively from the data and in discussion, theory can be useful. As with our participant, a student's ability to define and articulate his or her condition combined, academic situation and visual acuity impacts self-esteem and self-acceptance (Griffin-Shirley & Nes, 2005; Guerette, Lewis & Mattingly, 2011). Childhood experiences that contribute to healthy self-esteem include being listened to, being spoken to respectfully, receiving appropriate attention and affection and having accomplishments recognized and mistakes or failures acknowledged and accepted (Tuttle & Tuttle, 2004). During school-aged years, academic achievement is a significant contributor to self-esteem development (Beaumaster, 2003). The ability to compare oneself with peers is important in shaping students' self-esteem and influences the positive or negative feelings

students have about themselves. Through adolescence, peer influence becomes increasingly important, with successful relationships among friends significant in the development of high self-esteem for children (Cambra & Silvestre, 2003; Tuttle & Tuttle, 2004). Without the ability to read the visual clues and share learning with peers, students with vision impairment are disadvantaged in their schooling.

Edward has caring supportive parents who have clear expectations for their son. They sent him to an expensive academic private school to ensure he had educational stability and the best opportunity to achieve. Students in elementary school who have high self-esteem tend to have caring, supportive parents (Isberg, Hauser, Jacobson, Powers, Noam, Weiss-Perry & Fullansbee, 1989; Raboteg-Saric & Sakic, 2014). Edward was well aware of the expectations of both his parents and of the school to do his best. He availed himself of many extra-curricular activities, satisfying not only a desire to interact with peers but also to challenge himself. His willingness to try new things showed in his participation in many extra-curricular activities. Edward has a good voice which gave him kudos in the choir and would have added to his self-esteem. The school encouraged his self-agency with their expectation that he speaks to his teachers at the beginning of each school year. Edward's school reports show that he was achieving well academically. He appears to have satisfied both criteria for self-esteem in Maslow's *Hierarchy of Human Needs* (Maslow, 1987). Edward perceived both respect from others in the form of recognition, success, and admiration, and self-respect in the form of self-love, self-confidence, skill, or aptitude.

Edward described having a fairly limited social group, with rather more acquaintances than friends, but he does not appear to have had undue issues with social rejection or bullying. This may be because many of the boys at school have known Edward since Preparatory class. Edward has developed a persona of a loud, opinionated, able young man. He is not afraid to voice his opinions, even if at the expense of offending others. He justifies being loud and bold as being a way to be seen as more than "the kid who is vision impaired." Students integrate social identity into their own self-concept in school by assessing their position among peers, interpreting their own feelings and abilities from feedback received from parents, teachers, and peers (Gest, Rulison, Davidson & Welsh,

2008; Leflot, Onghena & Colpin, 2010). The development of a sense of self influences academic achievement, social and emotional competence, well-being and personality development (Elksnin & Elksnin, 2006; Hadley, Hair & Moore 2008; Trautwein, Ludtke, Marsh & Nagy, 2009), with the possession of a positive self-concept seen as a key variable in students' school success (Datta & Talukdar, 2015; Swanson 2003). Edward appeared to take his visual impairment in his stride but this may have an element of refuting his disability. He may believe that if he adheres to the "norm" he will be more accepted.

Edward did not want to be friends with the other boy with vision impairment attending his school. It could be argued that his desire to be perceived as "normal" results in him distancing himself from another who is 'different' (Crocker et al., 1987; Garcia, Tor & Gonzalez, 2006). A person's self-concept is essentially influenced by the ways in which he or she perceives significant others in the environment (Corcoran, Crusius & Mussweiler 2011; Festinger 1954). Edward's strong sense of identity contradicts research that argues that students with vision impairment typically have low self-concepts based on how they compared themselves with sighted peers (Datta & Talukdar, 2015). When Edward compared himself with his sighted peers, he assessed himself favourably and did not see himself to be so different.

It appears that Edward felt a strong sense of belonging at the school and participates in as many activities as possible. He believed he is accepted by his peers in these pursuits. For example, his confidence to be on stage reflected his sense of belonging and of safety that others would help if needed. Edward felt part of the group. He was not a reluctant participant, and regarded other members of the groups as friends, although they do not appear to be close. He felt privileged to attend the school and aimed to make the most of the opportunities given. Edward was supported by his mother who always made herself available to collect him from the school at whatever time required. This sense of safety, support and belonging may have helped give him the confidence he exudes, and the sense of his right to be as one with his peers. It is not that he wishes not to be vision impaired – this he knows he has no alternative but to live with – but he strongly believed he can be perceived as sighted and thus sees himself as an equal in a sighted community. He accepted

some accommodations may be required for equity. He may have few close friends but we sensed that this is partly by choice. He is bold and unafraid of saying what he thinks to people for fear they may withhold friendship, seeming to support research that indicates a certain level of confrontation and betrayal is essential for a healthy friendship, with a fear of confrontation reflecting a fear of losing friends (Hartup, 1993; Lifshitz et al., 2007). Edward seemed comfortable with who he is, and had a strong sense of where he is heading in life.

Acceptance and belonging are central tenets of effective inclusion (Jones, 2005, 2014). Inclusion is about community, meaningful participation and belonging (McLeskley et al., 2010). When students' feel that they belong to a class, they become more engaged and enjoy greater school success (Shields, 2004). While the teacher/student relationship is clearly a crucial one, peer relationships have been shown to have a significant impact on the emotional well-being of students. While Edward seems to have managed with just a few friendships consolidated from his early years, he did regard the number of people he could call friends as less than he would have liked.

Sapp and Hatlen (2010) argue that students with vision impairment are less successful at school and under-represented in the workforce. Unlike much previous research concerning students with vision impairment, Edward's schooling has been successful. We ascribe Edward's success to several causes. His few friends are long-term friends from childhood. The school had high academic expectations that Edward was able to meet. The school also provided challenging extra-curricular activities that provided opportunities for interaction with peers. Edward has a strong concept of self as abled. He is fully aware that he has a disability but does not allow this to hinder his positivity and engagement. He has developed self-reliance. Edward knows how he learns and what technologies work for him. The implications for schools and agencies working with students with vision impairment are that expectations for success should be maintained and supported, challenge is necessary for student growth and engagement and that it is vital to listen to the voice of the student.

## References

- Adderley, R., Hope, M., Hughes, G., Jones, L., Messiou, K. & Shaw, P. (2015). Exploring inclusive practices in primary schools: Focusing on children's voices. *European Journal of Special Needs Education, 30*(1), 106-121.
- Ainscow, M. (2012). Moving knowledge around: Strategies for fostering equity within educational systems. *Journal of Educational Change, 13*(3), 289-310.
- American Foundation for the Blind. (2016). *The expanded core curriculum for blind and visually impaired children and youths*. Retrieved 20 March 2016 from [www.afb.org/info/programs-and-services/professional-development/teachers/expanded-core-curriculum/the-expanded-core-curriculum/12345](http://www.afb.org/info/programs-and-services/professional-development/teachers/expanded-core-curriculum/the-expanded-core-curriculum/12345)
- Artiles, A. J. & Kozleski, E. B. (2016). Inclusive education's promises and trajectories: Critical notes about future research on a venerable idea. *Education Policy Analysis Archives, 24*(43). Retrieved 5 August 2016 from [http://dx.doi.org/10,14507/epaa.24.1919](http://dx.doi.org/10.14507/epaa.24.1919)
- Bardin, J. A. & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness, 102*, 472-483.
- Baumeister, R. F., Campbell, J. D., Krueger, J. I. & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*(1), 1-44.
- Brown, C. M., Packer, T. L. & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *The Journal of Special Education, 46*(4), 223-232.
- Byrnes, L. J. & Rickards, F. W. (2011). Listening to the voices of students with disabilities: Can such voices inform practice? *Australasian Journal of Special Education, 35*(1), 25-34.

- Cambra, C. & N. Silvestre. (2003). Students with special educational needs in the inclusive classroom: Social integration and self-concept. *European Journal of Special Needs Education* 18(2): 197-208.
- Corcoran, K., Crusius, J. & Mussweiler, T. (2011). Social comparison: Motives, standards, and mechanisms. In D. Chadee (Ed.), *Theories in Social Psychology*, (pp. 119-139). Oxford, UK: Wiley-Blackwell.
- Crocker, J., Thompson, L. L., McGraw, K. M. & Ingerman, C. (1987). Downward comparison, prejudice, and evaluations of others: Effects of self-esteem and threat. *Journal of Personality and Social Psychology*, 52(5), 907.
- Datta, P. & Talukdar, J. (2015). The impact of vision impairment on students' self-concept. *International Journal of Inclusive Education*, 20(6), 659-672.
- Elksnin, L. & Elksnin, N. (2006). *Teaching social-emotional skills at school and home*. Denver, CO: Love Publishing.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations* 7(2), 117-140.
- Finlay, L. (2008). A Dance Between the Reduction and Reflexivity: Explicating the "Phenomenological Psychological Attitude". *Journal of Phenomenological Psychology*, 39(1), 1-32.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of "seeing afresh." *Journal of Humanistic Psychology*, 53(2), 172-201.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J. & Sharma, U. (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Braddon, ACT: Australian Research Alliance for Children and Youth. (ARACY) Retrieved 9 December 2016 from <http://www.aracy.org.au/>
- Garcia, S. M., Tor, A. & Gonzalez, R. (2006). Ranks and rivals: A theory of competition. *Personality and Social Psychology Bulletin*, 32(7), 970-982.
- Garcia, S. M., Tor, A. & Schiff, T. M. (2013). The psychology of competition: A social comparison perspective. *Perspectives on Psychological Science*, 8(6), 634-650.

- Gest, S. D., Rulison, K. L., Davidson, A. J. & Welsh, J. A. (2008). A reputation for success (or failure): The association of peer academic reputations with academic self-concept, effort, and performance across the upper elementary grades. *Developmental Psychology, 44*(3), 625.
- Gluckman, M. (1961). Ethnographic data in British social anthropology. *Sociological Review, 9*, 5-17.
- Griffin-Shirley, N. & Nes, S. L. (2005). Self-esteem and empathy in sighted and visually impaired preadolescents. *Journal of Visual Impairment & Blindness, 99*(5), 276-285.
- Griffin-Shirley, N., Parker, A. T., Smith, D. W. & Zhou, L. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness, 105*, 533-547.
- Guerette, A. R., Lewis, S. & Mattingly, C. (2011). Students with low vision describe their visual impairments and visual functioning. *Journal of Visual Impairment & Blindness, 105*(5), 287-298.
- Hadley, A. M., Hair, E. C. & Moore, K. A. (2008). Assessing what kids think about themselves: A guide to adolescent self-concept for out-of-school time program practitioners. *Child Trends, 32*, 1-6.
- Haegele, J. A. & Porretta, D. (2015). Physical activity and school-age individuals with visual impairments: A literature review. *Adapted Physical Activity Quarterly, 32*(1), 68-82.
- Haegele, J. A., Zhu, X. & Davis, S. (2016). The meaning of physical education and sport among elite athletes with visual impairments. *European Physical Education Review, 1356336X16650122*. Retrieved 9 December 2016 from <http://metatoc.com/papers/58680-the-meaning-of-physical-education-and-sport-among-elite-athletes-with-visual-impairments>
- Hartup, W. W. (1993). Adolescents and their friends. *New Directions for Child and Adolescent Development, 1993*(60), 3-22.

- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S. & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children, 71*(2), 165-179.
- Hyerle, D. (2009). *Visual Tools for Transforming Information into Knowledge*. Thousand Oaks, CA: Corwin Press.
- Isberg, R. S., Hauser, S. T., Jacobson, A. M., Powers, S. I., Noam, G., Weiss-Perry, B. & Fullansbee, D. (1989). Parental contexts of adolescent self-esteem: A developmental perspective. *Journal of Youth and Adolescence 18*(1), 1-23.
- Jessup, G. M., Bundy, A. C., Broom, A. & Hancock, N. (2016). The social experiences of high school students with visual impairments. *Sydney eScholarship Repository*. Retrieved 9 December 2016 from <https://ses.library.usyd.edu.au/handle/2123/15685>
- Jones, P. (2005). Teachers' understandings of their pupils with profound and multiple learning difficulties. *European Journal of Special Needs Education, 20*(4), 375-385
- Jones, P. (2014). Whose insider perspectives count and why should we consider them? In P. Jones, (Ed.). *Bringing insider perspectives into inclusive teacher learning: Potentials and challenges for educational professionals* (pp. 1-8). Hoboken, NJ: Taylor and Francis.
- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, M. J. & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment, 30*(3), 182-196.
- Kvale, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Los Angeles, CA: Sage Publications.
- Kumar, D., Ramasamy, R. & Stefanich, G. P. (2001). Science for students with visual impairments: Teaching suggestions and policy implications for secondary educators. *Electronic Journal of Science Education, 5*(3). Retrieved 9 December 2016 from <http://ejse.southwestern.edu/article/view/7658/5425>
- Larkin, M., Watts, S. & Clifton, E. (2006). Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology, 3*, 102-120.
- Leflot, G., Onghena, P. & Colpin, H. (2010). Teacher-child interactions: Relations with

- children's self-concept in second grade. *Infant and Child Development*, 19(4), 385-405.
- Lifshitz, H., Hen, I. & Weisser, I. (2007). Self-concept, adjustment to blindness, and quality of friendship among adolescents with visual impairment. *Journal of Visual Impairment and Blindness*, 101(2), 1-20.
- Lieberman, L., Houston-Wilson, C. & Kozub, F. (2002). Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly*, 19(3), 364-377.
- Maslow, A. H. (1987). *Motivation and personality (3rd ed.)*. New York, NY: Harper & Row.
- McLeskey, J., Rosenberg, M. & Westling, D. (2010). *Inclusion: Effective practices for all students* (2nd ed.). Boston, MA: Pearson Education.
- Media Access Australia (2013). *Vision access scoping report*. Ultimo, NSW: Media Access Australia.
- Messiou, K. (2012). *Confronting marginalisation in education: A framework for promoting inclusion*. New York, London, UK: Routledge.
- Moss, J. (2013). Visual research methods in education: In between difference and indifference. *International Journal of School Disaffection*, 10(2), 63-77.
- Nieto, S. & Bode, P. (2012). *Affirming diversity* (6th ed.). Boston, MA: Pearson
- Oleson, M. (1990). Subjectively perceived quality of life. *Image: The Journal of Nursing Scholarship*, 22(3), 187-190.
- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International Journal of School Disaffection*, 11(2), 67-81.
- Opie, J. & Southcott, J. (2016). Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment. *International Journal of Whole Schooling*, 12(2), 19-35.
- Pietkiewicz, I. & Smith, J. A. (2012). A practical guide to using IPA. *Czasopismo Psychologiczne (Psychological Journal)*, 18(2), 361-369.
- Pringle, J., Drummond, J., McLafferty, E. & Hendry, C. (2011). Interpretative analysis: A discussion and critique. *Nurse Researcher*, 18(3), 20-24.

- Raboteg-Saric, Z. & Sakic, M. (2014). Relations of parenting styles and friendship quality to self-esteem, life satisfaction, and happiness in adolescents. *Applied Research in The Quality of Life*, 9(3), 749-765.
- Redgrove, F. J., Jewell, P. & Ellison, C. (2016). Mind the gap between school and adulthood for people with intellectual disabilities. *Research and Practice in Intellectual and Developmental Disabilities*, 3(2), 182-190
- Reid, K., Flowers, P. & Larkin, M. (2005), Exploring lived experience. *Psychologist*, 18(1), 20-23.
- Rodham, K., Fox, F. & Doran, N. (2015). Exploring analytical trustworthiness and the process of reaching consensus in interpretative phenomenological analysis: Lost in transcription. *International Journal of Social Research Methodology*, 18(1), 59-71.
- Rule, A. C., Stefanich, G. P., Boody, R. M. & Peiffer, B. (2011). Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, 33(6), 865-887.
- Sapp, W. & Hatlen, P. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment & Blindness*, 104(6), 338-348.
- Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York, NY: Teachers College Press
- Shields, C. M (2004). Dialogic leadership for social justice: Overcoming pathologies of silence. *Educational Administration Quarterly*, 40, 109-132.
- Shinohara, K. & Tenenberg, J. (2009). A blind person's interactions with technology. *Communications of the ACM*, 52(8), 58-66.
- Slee, R. (2013). How do we make inclusive education happen when exclusion is a political predisposition? *International Journal of Inclusive Education*, 17(8), 895-907.
- Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis. *Health Psychology Review* 5(1), 9-27.
- Smith, J. A., Brewer, H. M., Eatough, V., Stanley, C. A., Glendinning, N. W. & Quarrell, O. W. J. (2006). The personal experience of juvenile Huntingdon's disease: An

- interpretative phenomenological analysis of parents' accounts of the primary features of a rare genetic condition. *Social and Behavioural Research in Clinical Genetics*, 69(6), 486-496.
- Smith, J., Flowers, P. & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Los Angeles, CA: Sage.
- Söderström, S. & Ytterhus, B. (2010). The use and non-use of assistive technologies from the world of information and communication technology by visually impaired young people: A walk on the tightrope of peer inclusion. *Disability & Society*, 25(3), 303-315
- Southcott, J. & Joseph, D. (2015). Singing in La Voce Della Luna Italian women's choir in Melbourne, Australia. *International Journal of Music Education*, 33(1), 91-102
- Supalo, C. A., Isaacson, M. D. & Lombardi, M. V. (2014). Making hands-on science learning accessible for students who are blind or have low vision. *Journal of Chemical Education*, 91(2), 195-199.
- Swanson, S. (2003). Motivating learners in northern communities. *Canadian Journal of Native Education* 27(1), 61-73.
- Thurston, M. (2014). "They think they know what's best for me": An interpretative phenomenological analysis of the experience of inclusion and support in high school for vision-impaired students with albinism. *International Journal of Disability, Development and Education*, 61(2), 108-118.
- Trautwein, U., Lüdtke, O., Marsh, H. W. & Nagy, G. (2009). Within-school social comparison: How students perceive the standing of their class predicts academic self-concept. *Journal of Educational Psychology*, 101(4), 853.
- Tufford, L. & Newman P. (2010). Bracketing in qualitative research. *Qualitative Social Work* 11(1), 80-96.
- Tuttle, D. W. & Tuttle, N. R. (2004). *Self-esteem and adjusting with blindness* (3rd ed.). Springfield, IL: Edward C. Thomas.

- UNESCO (2005). *Guidelines for inclusion: Ensuring access to education for all*. Retrieved 9 December 2016 from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>
- UNESCO (2012). *Education: Addressing exclusion*. Retrieved 9 December 2016 from <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/inclusive-education/browse/4/>
- Whitburn, B. & O'Connor, B. (2011). *Exploring the voices of secondary school students with vision impairment about their experiences of inclusion: Implications for educational and support staff*. Paper presented at the Biennial Conference of the South Pacific Educators in Vision Impairment, Sydney.

## Chapter 6

### **“It is About Listening, About Them Listening.” Feedback from a Student with Vision Impairment.**

This third single case study presents Alex, whose experiences of mainstream schooling were to him so traumatic that they resulted in his withdrawal from school. Unlike James and Edward, Alex had aides who regularly attended class with him. Interactions with his aides were a particular focus of Alex’s understandings of his classroom experiences. He was one of the more significantly affected participants in terms of his vision loss, and used a cane for mobility. Alex’s school appeared to have expectations that he would behave as a ‘normal’ student. From his perspective, his differences were not accepted, and he developed no sense of belonging to the school. The aides provided to Alex had limited expertise and experience in working with a student with vision impairment, particularly the use of assistive technology. Aides’ lack of understanding of vision impairment effected Alex as they continually instigated activities that led to his extreme embarrassment, or feelings of being sabotaged. With no feeling of belonging, Alex experienced rejection and exclusion, which led to potent negative feelings of anxiety, depression, grief, and loneliness.

This study revealed the devastating effect exclusionary school practices have for a student with vision impairment.



**“It is about listening, about them listening.” Feedback from a student with vision impairment.**

**Abstract**

Inclusive secondary schooling for a student with vision impairment was explored by allowing him the opportunity to voice his personal educational experiences. This qualitative study analysed the in-depth interviews of the student’s experiences using Interpretative Phenomenological Analysis. In Australia, there is an expectation that legally mandated adjustments for students with disabilities will enable equity and quality in a mainstream educational environment that is inclusive. For the student in this study, his heartfelt exclusionary practices were so extreme he withdrew from his school. Quotations from the student reveal the extent of his personal anguish. A lack of understanding by school personnel of vision impairment and inclusive practices were viewed as contributing factors.

**Key words**

inclusion, vision impairment, Interpretative Phenomenological Analysis, bullying, secondary school

# **“It is about listening, about them listening.” Feedback from a student with vision impairment.**

## **Introduction**

Over the past two decades, there has been a growing interest by researchers in exploring the experiences of participants, using Interpretative Phenomenological Analysis (IPA) to analyse these experiences to better understanding how sense is made “of their personal and social world” (Smith & Osborn, 2003 p. 54). The focus is of the individual participant’s personal perception of their particular situation. Given the clear connections between the use of student voice and raising student achievement (Mitra, 2004) it remains puzzling that limited attention is accorded to the views of students with disabilities (Byrnes & Rickards, 2011). The concept of students without disability having a say in their educational program is an integral part of many contemporary educational programs (Thomson & Gunter, 2006). In contrast, when considering the opportunities given to students with disabilities to make comment, instead of a plethora of studies, fewer research articles have been found (Farrell, 2000).

It has been advocated that “to understand the lived experiences of people with disabilities, more qualitative research is required” (World Report, 2011 p. 46). Disability Standards for Education 2005 (Commonwealth of Australia, 2016) specifically refers to consulting the student with regard to their education. By listening to the lived experiences from students themselves, Norwich (2002) contends we capture a perspective that cannot be articulated in any other way. A scan of the literatures reveals that the most cited opinions regarding students with disabilities are those of academics, advocacy group representatives, parents, educational administrators, peers without disabilities and adults with disabilities. It is recognized that for most of those that comment, however empathetic they may be, it is not possible for them to understand fully the experiences of students with

disabilities (Middleton, 1999), an important point to consider as having a disability may dictate life experiences somewhat differently from those individuals without disabilities (Biklen, 2000).

The need for educational research that takes into account the voices of young people with disabilities, particularly in educational contexts has been widely expressed (Adderley, Hope, Hughes, Jones, Messiou & Shaw, 2015; Ainscow, 2005; 2012; Barnes, 2010; Messiou & Jones, 2015, Moriña Díez, 2010; Moss, 2013) with the belief that through research focussing on listening to students with disabilities, their perspectives will reveal facilitators and barriers to their education (Armstrong, 2005; Curtin & Clarke, 2005; Messiou, 2012; Rodgers, 2006; Slee, 1996; 2011). It is recognised that there may at present be a disconnection between research and the reality in the classroom, as so few studies undertaken explicitly seek to know how young people with vision impairment experience their schooling (Grima-Farrell, Bain & McDonagh, 2011).

### **The policy landscapes**

In Australia, students with vision impairment, a low incidence disability, generally attend mainstream schools, with policies of the Disability Discrimination Act 1992 (Commonwealth Australia, 2014) and Disability Standards for Education, 2005 (Commonwealth Australia, 2016) leading to adjustments and support services to be provided as required. Policy emphasises the right to education for all without discrimination, respecting diversity in an inclusive environment where barriers to accessing quality education or leading to exclusion are identified and removed (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013). The Salamanca Statement accepts that “human differences are normal and that learning must accordingly be adapted to the needs of the child rather than the child fitted to preordained assumptions regarding the pace and nature of the learning process” (UNESCO, 1994, p. 7) and “a change in social perspective is imperative.” Instead of focusing on preparing children to fit into existing schools, the inclusion emphasis is on preparing schools so that they reach out to all children, with equity and quality as

complementary foundations of education approaches. UNESCO (2005), in its Guidelines to Inclusion sees inclusion as both a philosophy and a process. The philosophy is based on the right of all individuals to a quality education with equal opportunity – one that develops potential and respects human dignity. Inclusion is viewed as “a dynamic approach of responding positively to pupil diversity and of seeing individual differences not as problems, but as opportunities for enriching learning” (p. 12). An inclusive approach to education strives to promote quality in the classroom, and where people’s differences are a naturally occurring and valuable part of society and which should be reflected in schools. If education is regarded “through an inclusive lens [this] implies a shift from seeing the child as a problem to seeing the education system as a problem” (UNESCO, 2005, p. 26). It is asserted that:

Education is not simply about making schools available for those who are already able to access them. It is about being proactive in identifying the barriers and obstacles learners encounter in attempting to access opportunities for quality education, as well as in removing those barriers and obstacles that lead to exclusion. (UNESCO, 2012, para. 1)

Equitable education systems support their students to reach their learning potential without pre-setting barriers or lowering expectations (OECD, 2012). The Department of Education and Training (DET, 2016) in Victoria states that it is committed to “delivering an inclusive education system that ensures all students have access to a quality education that meets their diverse needs” (p. 3). Students with vision impairment have a mandated right to adjustments to facilitate their inclusion into regular classrooms. Adjustments cover addressing physical barriers to ensure access to buildings and facilities; modifying programs and adapting curriculum delivery and assessment strategies; accessing specialized technology or computer software or equipment; provision of study notes or research materials in different formats; services such as visiting specialist teachers (VTs) or specialist support staff; and employing additional personnel such as aides for support (DET, Victoria, 2015; SVRC, 2015). The

ideal of inclusion exists, where a student is no longer made 'normal' or expected to change to fit into the educational system, but the system makes changes to meet the needs of the student (Artiles, Harris-Murri & Rostenberg (2006).

### **Reality in schools**

There are indications that the inclusion of students with vision impairment into mainstream schools may be resulting in exclusion. Children with Disability Australia (CDA) contend that for students with disability, accessing and participating in education remains one of the most significant challenges encountered in childhood (2016, p. 3). A student's physical presence in an education setting is often mistakenly perceived to indicate participation and inclusion, along with the misconception that inclusion involves a student adapting to a school environment, rather than ensuring education meets the individual needs of each student. The World Report on Disability (WHO & World Bank, 2011) states that referral to the experience of impairment is essential in determining barriers, with the recommendation to "consult and involve children in decisions about their education" (p. 227). When it comes to teaching students with vision impairment, their actual experience of being immersed in the school world remains largely unexplored. Such knowledge is essential if we are to understand challenges at play for teachers to develop professionally, and barriers to change for the success of the students (Cammarata, 2013).

### **Methods**

In this study the experiences of Alex (pseudonym), a secondary school student with vision impairment, were explored. His Russian parents moved to Australia prior to Alex starting primary school. Interviews provided access to in-depth personal accounts of his experiences and Interpretative Phenomenological Analysis (IPA) was used as the method for qualitative analysis with the focus on the lived experiences of the Alex and on how he made sense of his experiences (Smith, Flowers & Larkin, 2009). An IPA study characteristically involves

highly intensive and detailed analysis of the particular account, “wanting to know in detail what the experience for *this* person is like, what sense *this* particular person is making of what is happening to them (Smith et al., 2009, p. 3). Even though some of Alex’s experiences were recalled from a few years prior to the interview, they were described particularly vividly, suggestive of how impactful they were for him.

This research was situated in Victoria, Australia. Alex opted into this study after a call for participants was included in a newsletter of Guide Dogs Victoria, a widely-used provider of mobility instruction to students and safety advice to schools (Guide Dogs, 2016). An explanatory statement in the newsletter detailed the research and how contact could be made. Alex relished the opportunity of having someone listen to him about his experiences. Although at the time of interviewing he was being schooled via distance education, he had spent most of his schooling at his local primary and secondary state schools. Alex, having no vision in one eye and very little in the other, qualifies as legally blind for funding allocations. He was 18 at the time of interviewing. Ethical approval was given for the study by my University.

Alex was interviewed three times. When engaging in dialogue the researcher must approach the participant with humility, sensitivity, curiosity and respect, and a sincere desire to hear what he has to say. It is important to create an atmosphere for the interviews that ensure privacy, safety, trust and rapport. The first phone interview lasted about 30 minutes. Two further in-depth, semi-structured, face-to-face interviews lasted for approximately 75 and 60 minutes, concluding naturally with the length determined by Alex. The semi-structured interviews of Alex’s experiential accounts were facilitated by means of probes, and were audio recorded and transcribed. Alex was given the opportunity to review the transcripts. The IPA analysis involved reading through the transcript numerous times, making notes of a descriptive, linguistic and conceptual nature on the side, in order to become more familiar and involved with the text and enhance the interpretation of the data (Smith, 2008). These notes were studied for patterns and connections and subsequently clustered into preliminary themes. An independent analysis by a colleague, followed by a vigorous discussion of emergent themes occurred prior to finalising the themes. This

independent analysis of the same transcripts has the potential to increase trustworthiness and reach thematic consensus (Rodham, Fox & Doran, 2015). Following extensive analysis, a narrative of Alex's experiences was developed, allowing his voice to be included via verbatim quotations.

## **Results**

### **School Experiences**

In his interviews, Alex mentioned his growing feelings of frustration, victimization and sabotage as a student in secondary school. His fragile emotional state resulting from his experiences was apparent during the interview, as at some stages in the retelling he became quite agitated, but he was determined to share his experiences in the hope that understanding and acknowledgement would result. The emergent themes from his interviews are now discussed in more detail.

### **Feelings of desolation through exclusionary practices**

Alex recalled feeling an outsider at the school, having no feelings of being "just one of the kids." He stated that he "was out of the normal – a strange guy with a stick." However, aides and teachers, having no prior experience of a student with vision impairment, appeared to see Alex as a problem to fix and make normal, with frequent comments such as "you have to be like everybody else." Alex states he would have been happy for alternatives and was not at all concerned about being seen to have work practices which may have been different from others, because he perceives himself as different. He states,

Honestly, I don't care about being different to every other kid, because I am different. Hey guys look, I can't see out of one eye, I can hardly see out of the other eye, of course I am different. But I am interested in politics. I am interested in economics. I am interested in law. I am not interested in reading books about, um, football. So ... being different is just part of being human.

Although declaring his difference, it is clear that he also sees himself as similar, with interests' others may also have, and is confused that having one aspect of himself that is different is such a focus and the cause of so much angst.

Alex's experiences indicate he was expected to behave in the same way and do the same things as his peers, with no accommodations other than the allowance to use a laptop and some assistive technology. Alex refers to the demand to use an enlarged version of the school diary instead of allowing him to use a method he had devised with his parents. He states that his method was a very good solution, but it was "deemed unprofessional" by his visiting teacher, resulting in having to use "a 'normal' (*emphasis*) diary." He further explained that for him, the enlarged normal diary was very thick and heavy, and hard to carry around. When he asked to use his computer diary instead, the response was "No! You have to be like everybody else. You have to be in line with everything, no different diary." He asks "Why? Why was it so difficult?" He adds that "there are many, many, many, many examples of similar stuff happening."

Exclusionary practices were apparent when doors numbers were not made accessible to Alex. When starting at the school, numbers were to be attached to classroom doors in a size he could read, but "four months later there was nothing done." Alex had repeatedly asked his aide for help, but finally took it upon himself to approach the Deputy headmaster. He recounted, "I contacted him on the Thursday and on the Monday not just the rooms I was using but just about every classroom had those signs. This was the Deputy headmaster at the school that did that for me." He expresses some awe that someone at this level would help, as this had not been his prior experience. This also demonstrated to him that persistence may reap rewards.

### **Lack of understanding, communication and inappropriate expectations lead to feelings of frustration, victimization and sabotage**

Alex revealed his feeling of being "a guinea pig," as aides tried various new technologies with him. He was not consulted about whether he wanted these technologies, they were just

imposed on him, and as the aides had little understanding of how the technology operated it was unproductive. Alex did not view staff trying out new technology with him as a positive initiative. He felt used. He added that most of it was “quite useless and there always seems to be compatibility issues.” He stated he didn’t quite understand their “fixation on equipment” when that equipment did not work. Alex used an old mimio, a device used to send images from the board to his laptop that he had brought from primary school. Teachers appeared unaware of how it functioned for they regularly started to write on the board using incompatible pens. On one occasion Alex recalled, when he requested the teacher used black pens so he could read via the mimio, students started calling him a racist for using the term black when there was an African student in the class. His recollection of this incident was quite definite – and his perception appears to be one of others being against him, “chewing him out”.

Alex recalled several instances of suggestions made by aides, emphasizing the difficulty he faced and endured because of their lack of knowledge of vision impairment and of assistive technology. An aide wanted him to try using a large mouse cursor without comprehending that with his computer magnification the mouse cursor would take up most of the screen, but “there is no telling that to people who have a brilliant idea.”

An indication of his loss of faith in his support is revealed as he states “I was too optimistic and thought that people actually meant it when they said we are here for you ... I soon realized that it wasn’t the case.” Aides were resistant to make any changes to what was expected from Alex’s peers. To Alex, adjustments that took his vision impairment into consideration were not apparent. This is exemplified in the times-tables incident where he was expected to make a grid, then fill it out. He explained that although he could make a grid, it was so time consuming he could not complete the actual times tables as well. Because of this it was assumed he did not know his tables. In fact, he knew them well, but no one bothered to test him orally. He explained that, “they didn’t give me any alternative means of assessment. Nope, nope, nope.” Alex refers to this type of obstruction, of being required to do the same as the others even though a better way for him existed, occurring repeatedly. Another instance of resistance to

acknowledge difference and a show of inflexibility is the reaction to setting out for division. Alex used long division setting out as this gave him more space to write the digits. As he explained,

There are a couple of ways of doing division. There is a way to do with a sideways T where you put the number you are dividing by, and the working out goes down the page, and this is pretty good for me because it is very open and effective. We had some random square root looking structure and I was expected to cram in the numbers above the line and I was like “Hey guys, I can’t do that!” And I said, “Why can’t I do this?” And they said this is Australia, you can take your Russian method and shove it!

This was not the only reference to Alex’s heritage. He also recalls that two teachers in primary school “spent about six years running after me saying Alex is a Russian spy – a mad Russian spy!” He certainly did not find it funny and it was a strong memory for him. This alludes to his feeling of racial vilification, a very real emotional recollection for him. Alex does not believe teachers saw him for himself, but as a project – something to mould and change. Inclusion, taking people as individuals, “that was almost non-existent for me.”

Teachers seen to be complicit in making Alex appear ridiculous in front of his peers, “nagging me to participate even if it was hugely embarrassing”, especially in sports which were “all intended for sighted people.” The sports included “tennis, table-tennis, baseball, basketball, cricket, .... they told me to go participate.” He then described an incident involving an aide insisting he play table tennis – without any equipment modified for vision impairment. Alex also described another embarrassing experience when his aide decided that if bells were put around a basketball hoop, that would enable him to play.

Another of her brilliant ideas for “helping” me play basketball was to put bells around the basket-ball ring. First, I was supposed to locate that ring by hearing

those bells. The only the problem was those bells only rang when you hit the ring with the ball, and even if, by some miracle, I managed to get the ball inside the ring, everyone would have been so hysterical that I managed to do it!

He adds “unfortunately they didn’t make my life remotely easier.” After talks with Guide Dogs Australia, Alex tried to introduce a blind sport. “The students that did it with me, I enjoyed it and they enjoyed it, but like even rolling a ball with bells along the floor – a variation of goalball, was preferable to other sports, but ... it only happened once.” They did not investigate other blind sports because “my visiting teacher (VT) only advocated for being like everybody else.” Alex and his parents felt his treatment was not appropriate, so they requested a change of VT, and “went as far up as the regional director, but they said, ‘we see no problem here!’”

Alex feels that far from assisting him and encouraging him to achieve, aides were in fact restricting his learning, and sabotaging his efforts. He recalled many instances of negative interference, such as refusing to allow him to recharge his computer by unplugging the computer for “occupational and safety reasons” which was “pretty much when I realized they were sabotaging me rather than helping me.” Alex does not write but can touch type, and takes notes as teachers verbalize the lesson. In class Alex listened carefully to the teacher, and as he relied on his memory he had to really concentrate. However, “the aides would try and give me useless information at the same time”. They commented that they would not be talking about the class “but how I was far behind, or how they had a new gadget or something else. So, most of the conversation was quite a distraction.” He was given permission by a teacher to audio-record, but “some of the aides would be obstructionist and say, hey, you are not supposed to record; privacy laws.” Alex did not use dictation software in the classroom “because there is yelling in the classroom.” Alex related a story, again illustrating how he felt he was inhibited by an aide insisting he behaved ‘the same as others’, and did not deviate from the curriculum. In woodwork students were to construct a small shelf or stand. As he had a guinea pig, he

asked if he could make a small guinea pig house, and this met with the teacher's approval.

I got a giant sheet of plywood, a jigsaw and in those classes I did have a semi competent aide who helped line up things for me. At least she helped me and I had basically finished. But when I had a different aide she said "Alex, what are you doing! You can't build a guinea pig house! It is not on the list." Yeah! Just obstructive. I had a lot of that.

Alex did not like group work, because "some people are unmotivated" adding that "it is very hard to motivate them or be motivated when everything you do is criticised, sabotaged or otherwise subverted." Alex still has strong feelings of being criticised, recalling that when he tried to use leadership skills in group work he was criticised for being "over controlling or dictatorial" when giving out responsibilities to others, but when he didn't and things didn't get done, he was again criticised and held responsible for not taking control. He felt people were continually being angry with him. Alex feels he was unjustly treated by teachers as they would not criticise other students for swearing, but would "go after him" for the slightest mistake. He "felt victimized" and finally told his aides to "stop sabotaging my work." He felt the aides were too intrusive, and "they were on top of me the whole time." He adds, "few of them actually wanted to do their work, and virtually none of them wanted to scribe stuff for me, saying I wouldn't be able to have a scribe in the exams." Alex asserted, "The funny thing is I had my Victorian Certificate of Education (VCE) examinations recently, and I had a person who read everything out to me, offered to rewrite several times and actually listened to my directions." He recalled that the aides would not listen to him, and if he wanted a sentence repeated, they would insist on reading the whole paragraph, and they wouldn't transcribe for him. "You have to be independent", they would say. He felt aides "nagged" him about things he did wrong rather than help get things right.

Alex was rarely provided material in his preferred format, stating that, “I’ll read your stupid word document but just don’t make me read your piece of paper with a magnifier. I am still trying to straighten out my spine from all of the bending over the desk.” Ideally Alex would have liked work provided in various formats such as enlarged to a suitable font not requiring the use of a magnifier, or electronically, and with oral responses acceptable. Alex asserts that teachers just need to listen to students with vision impairment to be supportive. He recalls that on one occasion, communication between his maths teacher, Alex and his mother resulted in a successful pupil-teacher outcome, as his teacher showed an interest in how he learned, which was a rare occurrence and appreciated by Alex.

We did a hands-on presentation about what needs to be done for me. For example, my teacher said, “How good are you at coordinating movement [geometry], can you repeat moves after me.” And I couldn’t. She said “Okay, I can get that. Can you ...” She ran through a quick maths quiz and that worked. “I know you know what you are doing” and she just let me do it.

When asked if there had been any teachers who understood vision impairment and his needs, he could only recall a couple. There was only one teacher who for a test “would read it out and write answers down because that was infinitely better than having to enlarge it or roll over it with my magnifier and everything.” Alex believed most teachers did “not really know” him and “few teachers bothered” to try. Alex recalls another student who had support for intellectual difficulties. He was not as independent, and would gravitate to Alex, so they tended to be seen in the same light. Assumptions were made about Alex’s intelligence when it was simply a question of how his understanding was assessed. Just because he couldn’t quickly complete grids did not mean he didn’t know his tables. Alex added “The major problem was the approach in helping me.” He finally left the school.

I finally got out of there because I was in a really bad place emotionally ... It was because the aides and my teachers were being deliberately obstructive. They were

rather disrespectful, weren't helping me in the least, causing me lots of issues and also, they did seem to have sort of a sabotaging influence. It got to the point where I often wasn't able to attend school due to spontaneous temperatures and ... I believe the term is psychosomatic stress or something. But it meant it was hard to go to school.

### **Isolation, bullying and few instances of understanding**

When discussing friendships, Alex stated that

People were kind of hesitant to approach me firstly because I was out of the normal – a strange blind guy with a stick, but then on the other hand the people around me were so obnoxiously annoying that even the people who had stuck around me [from primary school] tried not to be around me when those people were. And unfortunately, those people were around me a lot!

Alex felt the consequences of school bullies. He exclaimed, “The school was full of bullies – teachers and students both. I expected it from the students but I um sort of didn't expected it from the teachers.” When students constantly threw things at Alex, teachers generally did nothing to stop the them.

It was quite popular to throw various objects at me. Now I wouldn't have minded if it happened once a week or something but when it happens several times an hour, and when people are being obnoxious about it, that is a bit of a different problem. I nagged pretty much everyone about this. Only one person tried to do something about it but unfortunately, he got fed up with the school and moved.

From Alex's perspective, the teachers' management of the classroom and their pedagogic strategies were inadequate, putting at risk his well-being, with disturbing and quite catastrophic results. Alex put up with considerable bullying, but recalls an incident that made him behave in a way that was not normal for him.

One particular individual thought it might be fun to jab at me in the dark at drama ... Jabbing me in the dark was a very bad idea because I am slightly paranoid and really it was a reflex, so when the kid jumped me I poked at him and choked him. It was still not right... but after that funnily enough he avoided me like the plague for the next six months.

This change from a victim to a victim bully was out of character for Alex, and not something of which he was proud. It indicates not only how exasperated he had become, but also how fearful.

He added that “the other kids didn’t stop though.” When asked if anyone stood up for him, he replied “Nope, no-one stood up for me because they didn’t want to get involved.” He was isolated, tormented and had no help from the students or teachers. “We are encouraged always to talk to teachers but the teachers never do anything so virtually nothing happened until I lashed out with that guy”. The negative impact school had on Alex is quite apparent given the intensity with which he voices his experiences, and depth of emotion he shows. At some stages, he chokes up as he recalls events that occurred up to three years earlier.

### **Alternative schooling and relief**

After leaving his high school, Alex had nightmares and continues to have moments when he experiences “panic attacks” remembering past experiences. Being motivated to learn and achieve, he is determined to complete his studies via distance education, explaining that he is a stubborn person, and can stick to decisions he makes. Alex enjoys distance education, getting personalized attention with his work, and having the ability to work at his own pace to get the work done. For Alex distance education allows him “to breathe”. Not everything is plain sailing, and when items do not arrive on time Alex was thrown back to his negative feelings of school, fearful of a repeat of “obstructionist” teachers. This was quickly sorted, resulting in Alex feeling much more supported than he ever was at school. He used the adjective “awesome” to describe his exam coordinator who helped decide what accommodations would best suit Alex in the exams. This was obviously a

new experience for Alex. Even so, he states, “people in VCAA (Victorian Curriculum and Assessment Authority) were not really on board” with the difficulties faced by a student with vision impairment, appearing “terrified” that “some added advantage” may be given. No deference was apparent regarding the accumulated disadvantage students with vision impairment experienced from the years of school learning that is 80 per cent visual.

Alex has regular communication with his distance education teachers via email, which he feels has helped significantly. Alex reveals his sense of being “saved” and his thankfulness and gratitude as he speaks of this support, stating it was “definitely more than he was expecting” and reduced him “to tears a couple of times.” He explains,

There were couple of issues with the English material ... so the teacher just said okay, come over we will have a chat. I went over. The teacher asked me a couple of questions. I answered those couple of questions. Done. So, the thing is for a vision impaired person, the easiest way to do anything is orally, with some things like essays I type up manually.

Teachers were available to assist Alex, and he felt he was important to them, he was worthy of support. Alex has passed several of his VCE subjects, and aims to go to university in the city, although would prefer to study at home.

Alex’s experiences at his state school have had lasting effects socially. When discussing social interactions, he explained:

Guide dogs and people who I talk to online are the only avenue for me. I kind of want to go out somewhere and meet with people but on the other hand I am a bit afraid about meeting new people of people because (a) I don’t have many social skills due to well any kind of social interaction being a massive mess in school because of the teachers there and (b) the fact that I am afraid of running into people and again that might send me back with my issues.

Although too old now to participate in Guide Dogs camps, Alex enjoyed the experience of being with other students with vision impairment, adding “Camps are pretty awesome because students are, well you are with people that understand you, both teachers and students.” Alex is part of a group formed at guide dogs, who regularly meet in the city at about six in the evening. Unfortunately, Alex is uncomfortable travelling at that time not only because he may run into a person from his past, but also because it is so busy, and dark during winter, so this prevents his participation. He believes his mobility skills are fine, but recalls putting himself in danger when in the city by “crossing the road on a red light as there wasn’t any ticking.” Alex is surprised that people that don’t know him, random people on chat forums, are the easiest to communicate with. “To compensate for some of my socialisation issues I have been quite active on the online world which isn’t a good substitute ... but these people respect me a lot more and understand me a lot more.” Alex is aware of other students with vision impairment, some with better vision than his, who have left school because of their treatment at school. He recalled the story of a student being continually told by his aide to “wear his glasses” because “if your fringe gets into your eyes you are going to damage them.” He didn’t own glasses. “And lots of other horror stories similar to mine, and it is just, I believe it is a state-wide issue – maybe nationwide I don’t know.”

## **Discussion**

In this study, we are given an insight into the experiences of schooling for Alex. It appears that he is still profoundly affected by what he found to be traumatising experiences. How is this possible given the current policies for inclusive schooling? In this discussion, we reconsider the findings of this IPA study in the light of existing literature.

### **The notion of inclusion**

At Alex’s school, it is apparent that some effort was made regarding the provision of adjustments. Aides were provided, a funded VT was in contact with Alex and the

school, and assistive technology was provided. But it is not simply the provision of adjustments that fosters inclusivity, it is the manner in which they are used. Changes were made to the physical environment of the school, such as enlarged door numbers, but this was months after Alex had started at the school, and only after considerable effort on his part. Assistive technology was provided, but without the expertise and training it was inappropriately introduced, used and maintained. Access to notes remained a barrier and aides appeared unable to ensure equity of access to the curriculum. Alex considers the school is trying to make everyone the same, viewing this as unrealistic – and this is the crux of inclusion. Difference should be accepted and teaching methods flexible enough to allow a mixture of learning/ teaching/ testing styles to accommodate all learners – difficult as this appears to be.

### **Belonging**

We can perceive the emotional impact schooling has had on Alex. He expressed feelings of being victimized, sabotaged, excluded, ridiculed, embarrassed, and alone. At times, he became angry. Baumeister and Leary (1995) reported many of the strongest emotions people experience, both positive and negative, are linked to belongingness, with being accepted or included resulting in a variety of positive emotions, whereas being rejected, excluded, or ignored leads to potent negative feelings such as anxiety, depression, grief, and loneliness. Osterman's (2000) research indicated children experiencing a sense belonging have more positive attitudes toward school, classwork, teachers, and their peers, with exclusion linked to various forms of emotional distress including loneliness, violence, and suicide. With acceptance and belonging reported as central tenets of effective inclusion (Jones, 2005, 2013; McLeskey, Rosenberg & Westling, 2010), Alex's schooling has not been inclusive. His negative social interactions have resulted in a lack of confidence in physically meeting people, resulting in a reliance on social media for interactions.

### **Classroom practices and aide support**

Much of Alex's disillusion with classroom practices resulted from the often-inappropriate action of his aides. In Australia, there are no minimum educational requirements for aides, and this lack of access to appropriately qualified and skilled support has been recognised (Vision Australia, 2012; Victorian Equal Opportunity and Human Rights Commission, 2012). Alex's aides showed not only an incomprehension of vision impairment but also had a misguided notion that their role was to "make normal." They appeared to have misunderstood the Australian policy mandating that "students with disabilities have equity to participate in quality schooling on the same basis as all other students" (Australian Curriculum, 2015, p. 1) to mean treating students all the same. This does not give students the same opportunity to learn (de Valenzuela, 2014). The aides do not embrace the inclusive philosophy of seeing individuals not as problems to be fixed and made normal, but as "individuals with a right to be different" (Ghosh & Galczynski, 2014). The role of aides has been the subject of research recently, with concern that aides are taking on instructional roles for which they are not necessarily educated or well prepared (Butt & Lowe, 2011; Harris & Aprile, 2015; Webster, Blatchford, Bassett, Brown, Martin & Russell, 2010; Webster, Blatchford, & Russell, 2013; Whitburn, 2014). Although in many instances, actions were taken with the best of intentions by aides and teachers, their actions resulted in a boy too afraid to attend school. Communication, which could have resulted in the circumvention of many deeply felt negative experiences, was not a priority. As Alex exclaimed, "It is about listening, about them listening to me."

The study also supports other studies in a number of areas concerning equity of access in the classroom. For Alex, the lack of the knowledge regarding vision impairment and the more visual subjects of mathematics, sport and science was quite evident and has previously been identified (Lieberman, Haegele, Columba & Conroy, 2014; Rule, Stefanich, Boody & Peiffer, 2011). No flexibility was apparent, and embarrassing experiences were often a consequence. There was a noted ineptitude regarding the implementation and use of assistive technology, supporting research that shows many teachers lack adequate knowledge regarding its use (Brown, Packer & Passmore, 2013; Zhou, Smith, Parker &

Griffin-Shirley, 2011; Kelly, 2011). With the majority of learning occurring through vision (SVRC, 2015), issues of time become a factor (Bardin & Lewis, 2008; Curtis & Reed, 2011) as well as adequate access to printed material (Khadka et al., 2012).

Social isolation and negative peer attitudes have been shown to affect students with vision impairment (Higgins & Ballard, 2000; Liftshitz, Hen & Weisse, 2007; Opie & Southcott, 2015). Alex was clearly a victim of bullying, both physically and socially. There is limited research into the bullying of students with vision impairment, however it has been noted that exclusion is exacerbated by classroom situations with higher levels of bullying and victimization linked to inappropriate teacher responses (Bauman & Del Rio, 2006).

### **Limitations and suggestions for future research.**

This study reveals an enduring depth of emotion regarding the educational experiences for Alex. However, being a study of one student, although extremely revealing, it remains a study of his experiences alone. Phenomenological studies of other vision impaired students would enhance this understanding of individual experiences of schooling, allowing for further relevant material to emerge, and perhaps elicit similarities and differences for consideration. This was beyond the scope of this project, and therefore observations and inferences rather than generalizations can be made from the data. Future qualitative research could engage with a larger sample of students with disabilities, not only vision impairment, but autism, hearing impairment, intellectual disabilities and others. It is important to understand the different experiences and challenges for all students so teachers can be better informed regarding the impact of their teaching practices and avoid inadvertently causing exclusion and distress.

### **Conclusion and Implications**

In summary, the findings of this study reveal exclusionary school practices for a student with vision impairment remain, in an era when acceptance, belonging, equity and quality in

education is espoused. Although only a single student study, one student going through these experiences is one too many. No intervention or offer of psychological support was given. Teachers must be more informed not only about inclusive practices but also of the specifics related to vision impairment. The damage ignorance may have, even if actions are made with the best of intentions, is unacceptable. The wider education of teachers regarding inclusion has recently been addressed, with annual teacher registration in Australia dependent on completing Professional Development on inclusion (Victorian Institute of Teaching, 2016). To ensure students with vision impairment have their specific needs met, a unit is advocated for any teacher with a student in their class who has vision impairment, educating them in learning from the perspective of students with vision impairment in order to best guide their practices.

The study highlighted a number of issues to further explore regarding the provision of an equitable inclusive education. These include teacher training in vision impairment; the expertise required for the use of instructive technology and assistive technology, instruction in the more visual subjects, testing strategies, time issues, and training requirements and roles of aides. The study shows the significance of listening to students, understanding how they experience the world, and the importance of future exploration of opportunities to assist in areas they highlight as important.

*“I was out of the normal, a strange blind guy with a stick ...but isn't being different just part of being human?”*

## **References**

Adderley, R., Hope, M., Hughes, G., Jones, L., Messiou, K., & Shaw, P. (2015). Exploring inclusive practices in primary schools: focusing on children's voices. *European Journal of Special Needs Education, 30*(1), 106-121.

- Ainscow, M. (2005). Developing inclusive education systems: what are the levers for change? *Journal of Educational Change*, 6, 109–24.
- Ainscow, M. (2012). Moving knowledge around: strategies for fostering equity within educational systems. *Journal of Educational Change*, 13(3), 289–310.
- Armstrong, D. (2005). Reinventing “inclusion”: New Labour and the cultural politics of special education. *Oxford Review of Education*, 31 (1), pp. 135–51.
- Artiles, A. J., Harris-Murri, N. & Rostenberg, D. (2006). Inclusion as social justice: Critical notes on discourses, assumptions and the road ahead. *Theory into Practice*, 45(3), 260-268.
- Australian Curriculum (2015). *Students with disability*. Retrieved from <https://www.australiancurriculum.edu.au/resources/student-diversity/students-with-disability/>
- Bardin, J. A., & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness*, 102, 472-483.
- Barnes, C. (2010). A brief history of discrimination and disabled people. In L. J. Davis (ed.), *The Disability Studies Reader*, pp. 20-32. New York, London: Routledge.
- Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology*, 98, 291-231.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Biklen, D. (2000). Constructing inclusion: Lessons from critical, disability narratives. *International Journal of Inclusive Education*, 4, 337-353.
- Brown, C. M., Packer, T. L., & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education*, 46(4), 223-232.

- Butt, R., & Lowe, K. (2011). Teaching Assistants and Class Teachers: Differing Perceptions, Role Confusion and the Benefits of Skills-based Training. *International Journal of Inclusive Education* 16 (2), 207-219.
- Byrnes, L. J., & Rickards, F. W. Listening to the voices of students with disabilities: can such voices inform practice? *Australasian Journal of Special Education* 35(1), 25-34.
- Cammarata, L. (2013). Phenomenology and hermeneutics. In C Chappelle (Ed.), *The Encyclopedia of Applied Linguistics* (pp. 1-9). Blackwell Publishing
- Children with Disability Australia. (2015). *2015 Review of the standards for education 2005 submission*. Retrieved from <https://www.education.gov.au/2015-review-submissions>
- Commonwealth of Australia. (2014). *Disabilities discrimination act 1992*. Retrieved from <https://www.legislation.gov.au/Details/C2014C00013>
- Commonwealth of Australia. (2016). *Disabilities standards for education 2005*. Retrieved from <http://education.gov.au/disability-standards-education>
- Curtin, M. & Clarke, G. (2005). Listening to young people with physical disabilities' experiences of education. *International Journal of Disability, Development and Education*, 52 (3), 195–214.
- Curtis, K., & Reed, M. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment & Blindness*, 105(9), 548-557.
- de Valenzuela, J. S. (2014). Sociocultural Views of Learning. In L. Florian (Ed.) *The Sage Handbook of Special Education*, (pp. 299-314). London, UK: Sage Publications.
- Department of Education and Training, Victoria (DET). (2016). *Program for students with disabilities – operational guidelines for schools 2017*. Retrieved from <http://www.education.vic.gov.au/about/programs/needs/Pages/disabilityprogram.aspx>
- Farrell, P. (2000). The impact of research on developments in inclusive education. *International Journal of inclusive education*, 4(2), 153-162.

- Forlin, C., Chambers, D., Loreman, T., Deppeler, J. & Sharma, U. (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Braddon, ACT: Australian Research Alliance for Children and Youth. Retrieved from <https://www.aracy.org.au/publications-resources/area?command=record&id=186>
- Ghosh, R., & Galczynski, M. (2014). *Redefining multicultural education: Inclusion and the right to be different*. Canadian Scholars' Press.
- Grima-Farrell, C. R., Bain, A., & McDonagh, S. H. (2011). Bridging the research-to-practice gap: A review of the literature focusing on inclusive education. *Australasian Journal of Special Education*, 35(2), 117–136.
- Guide Dogs Australia (2016) Policy and Advocacy priorities. Retrieved from [http://www.guidedogsaustralia.com/images/GDA\\_Policy\\_Priorities.pdf](http://www.guidedogsaustralia.com/images/GDA_Policy_Priorities.pdf)
- Harris, L. R., & Aprile, K. T. (2015). I can sort of slot into many different roles': examining teacher aide roles and their implications for practice. *School Leadership & Management*, 35(2), 140-162.
- Higgins, N., & Ballard, K. (2000). Like everybody else? What seven New Zealand adults learned about blindness from the education system. *International Journal of Inclusive Education*, 4(2), 163-178.
- Jones, P. (2005). Teachers' understandings of their pupils with profound and multiple learning difficulties. *European Journal of Special Needs Education*, 20(4), 375-385.
- Jones, P. (2013). Whose insider perspectives count and why should we consider them? In P. Jones, (Ed.). *Bringing insider perspectives into inclusive teacher learning: Potentials and challenges for educational professionals* (pp. 1-8). Hoboken: Taylor and Francis
- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment Blindness*, 105, 235-239.

- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, M. J., & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Lieberman, L. A., Haegele, J. A., Columna, L., & Conroy, P. (2014). How students with visual impairments can learn components of the expanded core curriculum through physical education. *Journal of Visual Impairment & Blindness*, 108(3), 239-251.
- Lifshitz, H., Hen, I., and Weisser, I. (2007). Self-concept, adjustment to blindness, and quality of friendship among adolescents with visual impairment. *Journal of Visual Impairment and Blindness*, 101(2), 1-20.
- McLeskey, J, Rosenberg, M., & Westling, D. (2010). *Inclusion: Effective practices for all students* (2<sup>nd</sup> ed.). Boston: Pearson Education.
- Messiou, K. (2012). *Confronting Marginalisation in Education: A Framework for Promoting Inclusion*. New York, London: Routledge.
- Messiou, K., & Jones, L. (2015). Pupil mobility: using students' voices to explore their experiences of changing schools. *Children & Society*, 29(4), 255-265.
- Middleton, L. (1999). *Disabled children: Challenging social exclusion*. Malden, MA: Blackwell Sciences.
- Mitra, D. L. (2004). The significance of students: Can increasing 'student voice' in schools lead to gains in youth development? *Teachers College Record*, 106, 651 - 688
- Moriña Díez, A. (2010). School memories of young people with disabilities: An analysis of barriers and aids to inclusion. *Disability and Society*, 25(2), 163-75.
- Moss, J. (2013). Visual research methods in education: In between difference and indifference. *International Journal on School Disaffection*, 10(2), 63-77.
- Norwich, B. (2002). Education, inclusion and individual differences: Recognising and resolving dilemmas. *British Journal of Educational Studies*, 50(4), 482-502.
- OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris.
- DOI: <http://dx.doi.org.ezproxy.lib.monash.edu.au/10.1787/9789264130852->

<http://www.oecd.org/edu/school/equityandqualityineducation-supportingdisadvantagedstudentsandschools.htm>

- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International Journal on School Disaffection*, 11(2), 67 – 81
- Osterman, K. F. (2000) Students' need for belonging in the school community. *Review of Educational Research*. 70 (3), 323–367.
- Rodham, K., Fox, F. & Doran, N. (2015). Exploring analytical trustworthiness and the process of reaching consensus in interpretative phenomenological analysis: lost in transcription. *International Journal of Social Research Methodology*, 18(1), 59-71.
- Rodgers, C. R. (2006). Attending to student voice: The impact of descriptive feedback on learning and teaching. *Curriculum Inquiry*, 36(2), 209-237.
- Rule, A. C., Stefanich, G. P., Boody, R. M., & Peiffer, B. (2011). Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, 33(6), 865-887.
- Slee, R. (1996). Inclusive schooling in Australia? Not yet. *Cambridge Journal of Education*, 26 (1), 19–32.
- Slee, R. (2011). *The irregular school: Exclusion, schooling and inclusive education*. London, England: Routledge.
- Smith, J. A. (2008). *Qualitative psychology : A practical guide to research methods*. Los Angeles: Sage.
- Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis : Theory, method and research*. Los Angeles: Sage.
- Smith, J. A., & Osborn, M. (2003). Interpretative phenomenology analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (53-80) London: Sage.
- Statewide Vision Resource Centre (SVRC). (2015). *Support for school-aged children with vision impairments in Victoria*. Retrieved from [http://svrc.vic.edu.au/Support\\_Vic\\_VI.pdf](http://svrc.vic.edu.au/Support_Vic_VI.pdf)

- Thomson, P., & Gunter, H. (2006). From 'consulting pupils' to 'pupils as researchers': A situated case narrative. *British Educational Research Journal*, 32, 839 - 856
- UNESCO. (1994). *The world conference on special needs education: Access and quality. Final report*. Salamanca, Spain: Ministry of Education and Science, Madrid; UNESCO. Retrieved from [www.unesco.org/education/pdf/SALAMA\\_E.PDF](http://www.unesco.org/education/pdf/SALAMA_E.PDF)
- UNESCO. (2005). *Guidelines for inclusion: Ensuring access to education for all*. Retrieved from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>
- UNESCO. (2012). *Education: Addressing exclusion*. Retrieved from <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/inclusiveeducation/>.
- Victorian Equal Opportunity and Human Rights Commission. (2012). *Held Back: The experiences of students with disabilities in Victorian schools* Retrieved from [http://www.humanrightscommission.vic.gov.au/media/k2/attachments/1404-VEOHRC\\_HeldBack\\_-\\_StudentwithDisabilityReportW3.pdf](http://www.humanrightscommission.vic.gov.au/media/k2/attachments/1404-VEOHRC_HeldBack_-_StudentwithDisabilityReportW3.pdf)
- Victorian Institute of Teaching. (2016). *Renewing my registration*. Retrieved from <http://www.vit.vic.edu.au/registered-teacher/renewing-my-registration>
- Vision Australia. (2012) *Supporting Children who are Blind or have Low Vision*. Retrieved from [www.visionaustralia.org/living-with-low-vision/children's-services](http://www.visionaustralia.org/living-with-low-vision/children's-services)
- Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C. & Russell, A (2010). Double standards and first principles: Framing teaching assistant support for pupils with special educational needs. *European Journal of Special Needs Education* 25(4) 319 - 336
- Webster, R., Blatchford, P., & Russell, A. (2013). Challenging and changing how schools use teaching assistants: Findings from the Effective Deployment of Teaching Assistants project. *School Leadership and Management*, 33(1), 78-96.
- Whitburn, B. (2014). Accessibility and autonomy preconditions to 'our' inclusion: A grounded theory study of the experiences of secondary students with vision impairment. *Journal of Research in Special Educational Needs*, 14(1), 3-15.

World Health Organization and World Bank (2011). *World report on disability*. Retrieved from [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf)

Zhou, L., Smith, D. W., Parker, A. T., & Griffin-Shirley, N. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105(9), 533-547.

## Chapter 7.

### **Inclusion for a student with vision impairment: “They accept me, like as in I am there, but they just won’t talk to me.”**

This fourth single case study presents Nick, who was the victim of ongoing bullying. Nick recounted the social exclusion and the stigmatizing effect of his vision impairment. From his account, it was clear Nick was a target of bullying and social isolation because of his disability, and that students did not have an understanding of disability to know how to interact with him. It was easy for him to be the victim of bullying. He acknowledged his difficulty interpreting verbal and nonverbal communication which contributed to his poor social skills. Nick’s teachers, with no prior experience of vision impairment or a knowledge of the ECC were poorly placed to support him. Social dynamics that contribute to peer victimization need to be understood so they can be addressed and appropriate intervention undertaken.

Nick did not complain about the bullying he received, as this would be showing weakness to others, and this he always avoided. He even made excuses for his peers, and some teachers’ poor behaviour, stating “they don’t understand” as if that somehow made it acceptable. He was victimized both physically and socially, but tended to self-blame, justifying the behaviour of others.

Inclusion for a student with vision impairment: “They accept me, like as in I am there, but they just won’t talk to me.”

Jill L. Opie

Jane Southcott

### **Abstract**

The experiences of a secondary school student with vision impairment in an Australian mainstream school is the focus of this study, with consideration given to the question of whether he perceived his education as inclusive. Using Interpretative Phenomenological Analysis for a single individual case highlights the extent of understanding which may be revealed by close examination of mindful experiences. The “gem” spoken by Nick (pseudonym), the sixteen years old participant, of “They accept me, like as in I am there, but they just won’t talk to me” summarises his sense of not belonging, of being other, and of being bullied. The inability of his school to provide an inclusive education is apparent, and his need for access to specialist teachers of vision impairment is highlighted. An insightful and coherent account evidenced with vivid quotes from the participant and detailed interpretative commentary completes this study.

### **Keywords**

inclusion, vision impairment, qualitative study, interpretative phenomenological analysis, bullying

**Inclusion for a student with vision impairment: “They accept me, like as in  
I am there, but they just won’t talk to me.”**

**Inclusive education and disability.**

*Education determines more than a child’s economic future—it is also critical to a child’s social and emotional development, to establishing a sense of identity and a sense of place in the world (Commonwealth of Australia, 2009 p. 6).*

Like students globally, Australian students have the right to schooling in an inclusive environment in which barriers to accessing quality education or leading to exclusion are identified and removed and diversity is respected. Definitions of inclusive education from international conventions and legislation focus on equity and access to high-quality education for all, while respecting diversity (UNESCO, 2012). This is advanced in policies of Australia’s Disability Discrimination Act (1992) and Disability Standards for Education (2005) (Commonwealth of Australia, 2014; 2016), along with curriculum policies which mandate that teachers are to ensure that all students with disability can participate in the Australian Curriculum on the same basis as their peers “through rigorous, meaningful and dignified learning programs” (Australian Curriculum, 2015). An inclusive approach to education is seen as one that strives to promote quality in the classroom, and where people’s differences are a naturally occurring and valuable part of society which should be reflected in schools.

It is known that inadequate educational access for students with disability will result in their diminished capacity for the rest of their lives, with under-education leading to “unemployment, lower levels of health, social isolation and a lifetime of disadvantage” (Senate Report, 2016, p. 4). In 1996, it was estimated that the global financial cost of childhood blindness (defined according to the World Health Organization – best corrected vision of 20/400 or worse) in terms of loss of earning capacity was between US\$6 trillion and \$27 trillion, surpassing the cost of adult blindness (Rahi, Gilbert, Foster & Minassian, 1999), with most of the loss occurring in low prevalence, high-income countries like the USA. The

OECD finds education ‘one of the most powerful levers available to make society more equitable’ (OECD, 2007, p. 11), with the highest performing education systems across OECD countries being those that “combine quality with equity” (OECD, 2012, p. 11). A recent OECD statistic contends that Australia is ranked 21 out of 29 countries for employment of people with disability (OECD, 2010). Almost one-third of submissions to the development of the National Disability Services (2012) highlighted that:

Far from ensuring young people with disabilities have every opportunity to realise their potential, the education system acts as a barrier to greater achievement and independence in their lives. (p. 47)

“Looking at education through an inclusive lens implies a shift from seeing the child as a problem to seeing the education system as a problem” (UNESCO, 2005, p. 26). The inclusive education model shifts the focus of educational policy and practice placing the problems associated with diversity within the social institution (Peters & Oliver, 2009). Despite the objective of the Standards aiming to eliminate discrimination, the National Disability Services (2012) of Australia reported that the direct experience of students with disability was that discrimination continues to be rife within the current education system. Bullying and harassment was said to be a common experience for many students with disability. Vision Australia (2015, p. 13) claimed that access to social participation “is vital for children’s social and emotional development.”

To better understand the impact of any gaps between disability policy and delivery, students themselves need to be heard. The World Report on Disability (WHO & World Bank, 2011) states that referral to the experience of impairment is essential in determining barriers, with the recommendation to “consult and involve children in decisions about their education” (p. 227). “To understand the lived experiences of people with disabilities, more qualitative research is required” (WHO & World Bank, 2011 p. 46). Research focussing on listening to students with disabilities gives them an opportunity to voice their concerns, enabling their perspectives to influence solutions (Armstrong, 2005; Curtin & Clarke, 2005; Messiou, 2012; Slee, 1996, 2011). The research question that drives this study is: What were the experiences of schooling for a student with vision impairment? This article explores the experiences and understandings of Nick about his schooling, with a focus on social aspects.

## **The participant**

Nick opted into a study into the experiences of secondary schooling for vision impaired students by replying to a call for participants made in the Guide Dogs newsletter, a regular newsletter available online to interested parties (Guide Dogs, 2016). A detailed explanatory statement was included. Ethical approval had been given from our university to undertake this research. Nick was attending a private Victorian secondary school after transferring from his country school after Year 7, and was in Year 10 and 16 years old when he opted into the study with parental permission. Although his parent/guardian had sought information from Vision Australia regarding schools where other students with vision impairment attended, this information was unavailable, ostensibly due to privacy reasons. They then chose his school because of its rowing program. Nick was the only student with vision impairment at the school. By looking deeply into schooling as experienced and related by him, we are given the opportunity to understand schooling from his perspective. It is only in this way can we realistically evaluate the reality of an inclusive education for him.

## **Methodology**

The qualitative methodology of Interpretative Phenomenological Analysis (IPA) is increasingly used in education and was chosen for this study (Smith, 2011). IPA has three primary theoretical underpinnings: phenomenology, hermeneutics, and idiography. Influenced by Husserl's phenomenology, IPA is concerned with examining experience "in its own terms", not overly influenced by "prior psychological theorizing or by personal proclivities of the researcher" (Smith, 2017, p. 303). IPA identifies the exploration of the meaning of personal experience as an interpretative endeavour on the part of both participant and researcher, and is described as a process of engaging in the double hermeneutic of "the researcher trying to make sense of the participants trying to make sense of their world" (Smith & Osborne, 2015, p. 26). IPA is idiographic, committed to the detailed analysis of personal experience (Smith & Osborn, 2015) offering "detailed, nuanced analyses of *particular* instances of lived experience" (Smith, Flowers & Larkin, 2009, p. 37). The intensity of activity for each case means that IPA studies are usually conducted on single or relatively small sample sizes (Smith, 2008, 2011). Smith et al. (2009, p. 38) contend that a good case study with an insightful analysis of data from a sensitively conducted interview can make a "significant contribution" and rigorous single-subject research may reveal the unexpected (Horner, Carr,

Halle, McGee, Odom & Wolery, 2005). Data were collected through in-depth, exploratory, semi-structured interviews as this allowed the researchers to hear what the participant had to say in his unfolding account of his experiences and decide when and where to probe further (Kvale, 1996, 2009; Seidman, 1998; Smith, Flowers & Larkin, 2009; Smith, 2017). As Smith contends, interviews do not follow a prescribed form, with a research question and interview schedule “used very flexibly during the interview as the participant is probed on areas arising” (Smith, 2017, p. 303).

All interviews were audio-recorded and transcribed verbatim before being subjected to an idiographic qualitative analysis, looking in detail for essential themes. As Smith (1996) stated, IPA believes in a chain of connection between embodied experience, talk about that experience, and a participant’s making sense of, and emotional reaction to, that experience. Data analysis is guided by “an attitude of openness and a willingness to dwell in the data” consistent with the approach taken toward data collection (Cassidy et al., 2011, p. 269). The focus remains the participant’s attempt to make sense of their experience and the analysis progresses from the particular to the shared and from the descriptive to the interpretative (Smith, Flowers & Larkin, 2009). Interviews were read and reread before transcribing, annotating and looking in detail for essential themes. When you read the written words, you do not hear the inflection of the participant’s voice, and meaningful pauses are lost which can obscure meaning. It is imperative to listen repeatedly to ensure an understanding of what is really being stated and inferred before any interpretation of meaning behind utterances is made. The interpretative analysis affords the researcher an opportunity to explore the participant’s understanding through the “telling” of their “own stories in their own words” (Reid, Flowers & Larkin, 2005, p. 18), and to deal with the data in a speculative fashion: to think about “what it means” for the participant to have made these claims, and to have expressed these feelings and concerns in this particular situation (Larkin, Watts & Clifton, 2006). The need for the researcher to bracket previous knowledge and assumptions, remaining genuinely open, curious, and at the same time critically self-aware and reflexive, underpins this approach (Brocki & Wearden, 2006; Finlay, 2013).

Initial notes included points of interest, key descriptive comments, repetitive phrases, as well as more interpretative conceptual comments. Moving away from the transcripts and working with the initial notes, categories were compiled resulting in the identification of emergent themes (Southcott & Joseph, 2015). At this stage pruning occurred as the researchers worked to maintain the depth and complexity by focussing on the most important

and interesting data. The credibility of this research was enhanced by independent analysis of the interview transcripts undertaken by each researcher in isolation prior to a robust, roundtable discussion regarding the plausibility of the emergent themes (Smith & Osborn, 2003). Each researcher brought their own perspectives to the analysis which supported the sense making experiences of the process (Fade, 2004). Connections were made between identified themes and a summary of pivotal themes created and placed in tentative categories that brought to the fore pertinent points of interest. From these, key words and explanatory notes were placed in a table and linked to the original marginal notes on the transcript as a preliminary interpretation. Finally, the groupings were prioritized and the data were reported thematically, illustrated by direct quotations from the transcripts (Smith et al., 2009). Comments and reflections made by the participant were thoroughly analysed in an endeavour to see beyond the obvious to implied meaning, seeking what really matters. While there is no specific method that can be applied to IPA to judge validity, Smith, Flowers, and Larkin (2009) favour a four principles approach involving reviewers looking at the research from the perspective of sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance. In addition, reviewers might also be concerned with looking for a “commitment to the idiographic approach, attention directed toward an experiential account of significance to the participant, interpretative as well as hermeneutic analysis, and caution in moving toward general claims” (Cassidy, Reynolds, Naylor & De Souza, 2011).

Using Interpretative Phenomenological Analysis (IPA) for a single individual case highlights the extent of understanding which may be revealed by close examination of mindful experiences. The experiences of Nick, a secondary school student with vision impairment in an Australian mainstream school were the focus of this study, in consideration of the question as to whether an inclusive education was a reality for him. Themes of a lack of friends, resilience and bullying were seen as of particular importance to Nick and considered in detail here, while acknowledging themes of access to the curriculum and difficulties with technology and support were also of significance. Globally, inclusive education has an expectation of schools catering for all students regardless of disability. But concerns remain that the reality for students with vision impairment is of schooling that is exclusionary, where access to an equitable and quality education is not a reality.

This research was carried out by Jill Opie and Jane Southcott. Jill is a mainstream secondary mathematics school teacher who, with an interest in all students reaching their potential, completed a Master of Education (Special). She has worked with students with disabilities and learning needs throughout her career, often finding herself in a position of

mediator between student, staff and school. She is currently completing her doctorate that includes a number of phenomenological studies concerning students with vision impairment. Jane has undertaken many phenomenological studies that focus on issues of inclusion in learning across the lifespan. Jane has supervised many doctoral students, and is a supervisor of Jill.

After a thorough review and upon reaching consensus regarding the theme upon which to focus, the writing began. Direct quotations are included to present the participant's voice (Pringle, Drummond, McLafferty & Hendrey, 2011).

## **Findings**

### **Nick has no friends**

That Nick was isolated from his peers was quite apparent from the interviews. Why this was so, and the impact of this on his schooling required more intensive reflection and interpretation. Nick was isolated, felt alone at school, had no friends among his peers and no one made any effort to speak with him. The social repercussions of Nick not being able to see facial expressions or gain much visually from his surroundings did not seem to be apparent to his aide or teachers, as he had no social skill intervention or training. As he was not allocated a Visiting Teacher (VT), input from a specialist trained in vision impairment was not available to staff or to Nick.

Nick reflects, "I don't really have a friend at school. They accept me like as in I am there. Like they won't be mean to me but they just won't talk to me." He started at the school in Year 8, whereas most students started in Year 7, or had come up from the junior school during which time many friendships had been developed. Nick felt this exacerbated his isolation. He attempts to justify his rejection, stating:

Some people have been at school since prep. And I am the first person they know who is visually impaired. And I think it is just like a thing in people's head sometimes – like they want to talk to you but they're just too nervous in that they just don't want to offend you.

The notion of not having friends was repeated as Nick variously stated "Friendships at [my school] - they don't really understand. I don't really know. They accept me to an extent but

they don't talk to me," and "I don't have a close friend. No. I don't have a friend." He reflects on the behaviour of his rowing crew:

Well some of my crew [rowing] are nice, it's just that they don't talk to me at school. This is just my theory – that if you are seen talking to me, it's like, oh my god you're talking to Nick, why are you talking to him? That's just my theory. I'm not certain other people think that, I'm just saying that I must be a strange person to them because I can't see.

It is as if Nick does not feel he is worthy of being spoken to in public. He appears to accept and even justify that boys ignore him because he is "strange" and "can't see" as a way to understand their rejection of him.

When asked if he talks to other people when he is in his homeroom, Nick replied after a significant pause "Um, my homeroom teacher who is all right. He then added another boy, calling him by his nickname, but not with any confidence. Even in a crowded room he feels very much on his own. Nick further reveals his isolation stating, "I sit by myself in class." He is normally first in class but others deliberately avoid sitting next to him. "Yes, I feel pretty much on my own." "Well I don't have lunch with anybody."

Nick desperately wants a friend. After confiding he had no friends in the first two interviews, he made a point in the third interview to say he now had a friend. Joe, the music captain at the school, had since spoken to Nick. It appears just one contact was enough for Nick to give him friendship status. Nick stated, "I do have a friend now. He plays guitar ... he said I should try to get into a guitar ensemble and play at lunchtimes too." Nick admitted to not playing the guitar well, but hopes if he takes up the bass instead he might have a chance "as it is easier I think." Nick adds, "Joe is a big person in the music school – everyone knows him" and adds, "but I don't go to music at lunchtimes." He was very keen to let the researcher know of the new development of "having a friend" although he had taken no steps to learn the bass and take the interaction further. It may have been important to his self-esteem to ensure that the researcher did not think less of him because he had no friends as revealed in the first two interviews. He did not want to appear different to others, open to pity.

**Nick is keen to show that being blind does not mean helpless.**

Nick comments, “I want to put in as much as I can, not just to show myself but to show other students that I may be blind but I can do a lot.” It is extremely important to Nick that he is not seen as needy. He wants to be recognized as someone who can do things, and who should not be left out just because of his vision impairment. He states,

Basically, I want to try to get leadership positions to say to people that I may be blind but I can do something. [Pause] Like it’s just all you can do. All you can do is try. And like I have tried to do a lot of things. And sometimes you don’t come out on the top, you come out on the bottom. But you just have to get up and try something new.

Nick does not ask teachers for help. He does not want others to see him as needing help; does not want to disturb teachers; does not want teachers to know he is struggling and put him on a modified program. He maintains, “I don’t want to look like I am doing different work... because I am now in mainstream and I don’t want to look like I am weak” adding, “it’s just always how I’ve been. I don’t like looking like I need help.”

He does have times when he cannot do what is expected, but rarely lets this be known. When he does he states that:

Sometimes I have to go up and say this is just not possible for me to do. It’s very hard. Teachers, they don’t understand really. They just don’t understand so they don’t know how to react. They don’t know and that’s what I don’t know. A big fear I have of people is of the unknown, ... what will happen if such and such happens. What will be their reaction? I sometimes feel like that when I speak with the teachers.

There is lack of communication between Nick and his teachers which has perpetuated his feeling of insecurity and avoidance of ridicule. We can sense his fear of teacher reaction – a fear of an unknown response.

It appears teachers, if aware of the difficulties Nick experiences in the classroom, are unable to ensure he is getting the same quality education as his peers. Nick is conscious of other students stating, “The thing is, I don’t want to interrupt the class, just because of me.” He puts others before himself, attributing a low status to himself. He attributes this reluctance to seek help to his grandfather, adding “This does come back from my grandfather engraving that in me. I have to learn myself and that’s the thing.” “I always have a problem asking for help. My grandfather taught me this. He said it would just make me look weak. And I have

learnt that.” Teachers would have been aware of Nick’s struggles, as when sharing his student report, it was obvious he was struggling in all academic areas.

When asked if he felt he could ask for help from another student, Nick replied,

I just don’t really want to do that. I’ve never really done that, asked another student for help. I’ve just never done it. I don’t know if I’m just too scared or nervous or whatever ... what the reaction is going to be, what they might think of me. ‘Cos now it’s all like the social status in this school, it’s like lots of cliques and that nonsense.

Image is important to Nick, and he avoids any show of neediness. He is fiercely independent, but also reveals a naivety regarding other students not observing what is going on. This could be attributed to his lack of visual cues from his surrounding environment. He confides, “They never knew I was on a modified, because I was still in the same classroom and still virtually doing the same thing. So, they didn’t know I was doing a modified.”

Nick experiences physical difficulties particularly when there are six periods in a day rather than five, as then his eyes are tired and his “nystagmus is going insane” He states he sometimes has to let teachers know he is having sight issues.

I try and do my best with my sight, and sometimes it makes me feel a bit weird, and I have to say that I don’t know how I will go in this class ‘cos of my sight. Weird because of how, I don’t know, how they [teachers] will react and what they will make me do.

Nick feels if he shows any neediness he will be letting his grandfather and himself down. It seems of paramount importance to him not to stand out, not ask for help, not appear needy, and to show no weakness. He does not want to appear different, which is also revealed in his reaction regarding PE. While appreciating the school encouraging him to join in the PE activities, he is uncomfortable with their methods.

[My school] went out and bought a whole lot of different equipment for me for PE and it does make me feel different. (*Embarrassed semi-laugh*). PE it’s always, well adapted, well not really adapted. It is using the equipment they have got for me most times, but the same games, they have barely modified them. I am just part of it and use the equipment but (*whispered*) other students don’t know.

It is apparent that the school has not had discussions with Nick regarding what accommodations he would be comfortable with, and it embarrasses him to think others may see him as needy. He tries to kid himself that other students won't notice the "special equipment" incorporated in the lessons.

**Nick has been the subject of significant bullying.**

Nick recalled that, "At [Camp] there were 7 in the house. So, because there were two people in each room, I had my own room." Once again it is the boy with vision impairment who is the odd one out. The school did not ensure he was not on his own. They were collaborators in his isolation by having only 7 boys in the house not 8, negligent in ensuring he was not being excluded. In fact, Nick was subjected to a raft of bullying practices. He arranged his food supplies in a cupboard, only to find students would deliberately move them. "They just didn't understand how I managed when I was at home – like I would have certain places to put things. And they would just move them and I was like, well, you have got to be kidding me!" When reflecting on the boys in his house he uttered, "Oh, my housemates. Oh (sighs – long pause). They were (pause), oh, I got pranked quite a few times. They pranked me – pouring water in my bed, putting soap in my ice-cream. It was funny? (Questioning tone). Nick clearly did not think it was funny, but accepted this as the norm for him. When asked if many boys were pranked, he admitted that it was really just him, and stated "they were just very, very awful sometimes."

Even in rowing, for which the school was chosen and possibly why they accepted him as a student, he is subjected to a form of bullying by being placed in a team inferior to his ability. Nick rows at the National level. He reveals, "I don't mind not being in the A crew but it kind of means that they are putting an A division rower in a B division boat. Which is kind of unfair, but no one would know." He adds, "I would have set up the crews in a different way than the coach has set it up. But I am fine with that, they know what they are doing. Allegedly!" It appears he is so familiar with such negative experiences he just accepts it as his due. He may not like it but he will not complain or put his case forward to see why he was excluded in this way. He does feel the discrimination, but is philosophical, stating "I also row in a single scull. Just me in the boat. I row by myself. I know it is all me, so if I do something wrong it is me, no one else's fault." He will not attribute any blame onto others, in any aspect of his schooling.

While on an interstate school camp, Nick interacted with some indigenous boys, recalling:

Some of the aboriginal kids, they were so good, they were better than Melbourne kids. They were. There were ... They were caring, and actually understood. I don't know how. They just treated me as normal. Like I didn't have to say anything. Nothing. (light happy laugh).

This statement reveals that no matter what excuses Nick finds for peers not being friendly, he is hurt by their attitude. The aboriginal boys could see past his vision impairment, and just see him for who he was, simply another boy – a student interested in their culture and keen to talk. He also recalled meeting a person with vision impairment in the town, who spoke with him. “We had to do some community work in town and there was actually a blind person there in the town and I had a chat with him for a whole hour!” It is as though Nick finally had someone who thought he was worthy of talking to. He felt alone, starved of real communication, and here was a stranger willing to spend time with him. The awe and thankfulness he felt were evident in his voice as he reflected on this interaction. He stated,

By being the first [student with vision impairment] at both schools I've been to, I was kind of the guinea pig, so if there were more [students with vision impairment] it would have been easy with friends. It is just hard being the only person with vision impairment at my school because you have all these sighted people.

## **Discussion**

Nick confirms many of the findings of past research, such as students with vision impairment being at risk of social exclusion and of being stigmatised by their impairment (Sacks & Wolffe, 1992; Agran, Hong & Blankenship, 2007; Hess, 2010; Thurston, 2014). Social interaction skills and socially appropriate behaviour are learned primarily by observing the way in which others interact (Wolffe & Kelly, 2011; Lohmeier, Blankenship & Hatlen, 2009), and the inability of students with vision impairment to recognize faces and receive facial cues is a major factor hindering their social interaction (Curtis & Reed, 2011; Khadka, Ryan, Margrain, Woodhouse & Davies, 2012). Students with disabilities are more likely to be victimized, and for students with vision impairment their difficulty interpreting verbal and nonverbal communication contributes to poor social skills and inability to connect with peers, contributing to their victimization (Kaukiainen, 2002). Students with vision impairments

need to access all areas of the general education curriculum at a level equitable to their sighted peers in an independent fashion, and in order to do so require instruction in the areas known as the Expanded Core Curriculum (ECC) guided by specialist teachers trained in vision impairment (Sapp & Hatlen, 2010). Significant relationships exist between the receipt of instruction in ECC areas and meaningful outcomes, such as employment, postsecondary training, and engagement in social activities (Sapp & Hatlen, 2010; Wolffe & Kelly, 2011; Ravenscroft, 2013). There is reputedly a “distinct lack of access to appropriately qualified and skilled braille teachers available to students who are blind or have low vision across Australia” (Vision Australia, 2015 p. 5). Social skills are one component of the ECC, and with no VT input there was no awareness of the need for the ECC, and social issues were not addressed. Ravenscroft (2016) emphasises the importance of a VT for empowering others “by collaborating and consulting with the class teacher and others, and to provide awareness raising” that will inform them about the implications a vision impairment may have. Simple awareness raising is regarded as insufficient, and “mainstream teachers must be empowered to change their practice” (p. 204).

Negative peer attitudes resulting in low self-esteem are recognized as a major barrier to successful inclusion (Lifshitz, Hen & Weisser, 2007; Sacks et al., 1998). Nick is socially isolated. Protective self-preservation tends to dictate that if you do not court rejection then it does not happen. He has no understanding of behavioural norms, and no recognition of how his difference is seen. His self-deluding practices of students “not noticing” modifications such as those made in PE are for self-protection. That he is lonely is highlighted by his gratefulness when he is included, demonstrated by his near elation when a blind man spoke to him for a time while on camp, and when some indigenous boys interacted as if he were just another ordinary boy. Being without friends means he has no protection, no support at school and no one to discuss how to manage classroom expectations (Opie & Southcott, 2015).

It is apparent that Nick is desperate to save face. He does all he can to avoid others viewing him as weak. He does not approach teachers for assistance, convinced that he should work things out for himself, and that asking is showing weakness. He does not complain about the bullying he receives, as this too would be showing weakness to others. He does not appreciate that asking for help is quite usual and that his peers constantly use teacher interaction to benefit their learning. Nick is passive, never proactive in seeking help or advising teachers of his needs. He even makes excuses on their behalf. He has no expectations of the teachers or the school – feeling grateful to the school for simply allowing

him to attend. He makes excuses for students pranking him – stating that they just don't understand. He makes excuses for teachers not delivering work in an accessible manner, stating they are too busy. He makes no assumption that the school should have an awareness of vision impairment, or that it should be educating the school community to understand, or that it accepts responsibility for delivering an equitable education. Teachers' themselves show little understanding, and he has no expectation that students will understand, nor that this could or would change, and sees no point in being more proactive against this tide of ignorance.

Nick is clearly a victim of bullying. He is victimized both physically and socially, but tends to self-blame, justifying the behaviour of others. There is very limited research into the bullying of students with vision impairment. Bullying occurs in many forms including physical bullying, verbal taunts and threats, social-group exclusion including exclusion, humiliation and rumour-spreading, and cyberbullying (Dane-Staples, Lieberman, Ratcliff & Kala, 2013), all of which Nick has experienced. Research has found that whether a student is a bully or a victim is highly dependent on their status (Prinstein & Cillessen, 2003; Farmer, Wike, Alexander, Rodkin & Mehtaji, 2015), with disability linked with low status (DaneStaples, Lieberman, Ratcliff & Kala, 2013). Students who perpetrate bullying (bullies) are distinguished from students who both perpetrate and are victims of harassment (bully victims) and passive non-aggressive victims (Olweus, 1978). Students identified as "different" due to their disability are consistently placed in the victim role (Rose, Swearer & Espelage, 2012). Students are excluded by peers' due to their appearance (e.g., glasses, nystagmus) (DeCarlo, McGwin, Bixler, Wallander & Owsley, 2012). For students with vision impairment, their difference is compounded by their need to use assistive technology to operate in the school environment (Scarpa, 2011). Nick presents as a non-aggressive victim. A non-aggressive victim will ignore bullying behaviours or passively accept the attacks from peers (Sekol & Farrington, 2010). Research suggests non-aggressive victims may suffer from psychological trauma, withdrawal, loneliness, isolation, anxiety, and low self-esteem, with mental, physical and social adjustments negatively affected (Olweus, 1993; Batsche & Knoff, 1994; Farmer et al., 2015; Sekol & Farrington, 2010). Non-aggressive victims of bullying have been found to display behavioural vulnerability; are withdrawn and solitary in their behaviour, avoidant of conflict, and hovering on the edge of the peer group (Fox & Boulton, 2005), all behaviours demonstrated by Nick.

Nick is seen to make excuses for the behaviour of both his peers and teachers, stating that they don't understand. The Kelley interpretation of the Attribution Theory (Heider, 1958) described to "explain how people use information to make attributions for the outcomes of others", states that by reviewing situations, students will attribute the behaviours of others to their person, a particular stimulus, or a situation (Martinko & Thomson, 1998, p. 273). In attribution theory, internal attribution is seen as attributing self-blame, while external attribution blames others (Major, Kaiser & McCoy, 2003). Students in a study by DaneStaples, Lieberman, Ratcliff and Rounds (2013) articulated internal attributions (self-blame) for their bullying, specifically their vision impairment. Few felt bullied because of external attributions (others being mean, power). This is reflected in the behaviour of Nick, who is seen to self-blame rather than attribute blame to students for the meanness of their behaviour.

Bullying is not merely a dyadic problem between a bully and a victim, but is recognized as a group phenomenon, occurring in a social context in which various factors serve to promote, maintain, or suppress such behaviour (e.g., Olweus, 2001; Rodkin & Hodges, 2003; Swearer & Hymel, 2015). Exclusion is exacerbated by classroom situations with higher levels of bullying and victimization linked to inappropriate teacher responses (Bauman & Del Rio, 2006). Nick's teachers, with no prior experience of vision impairment or a knowledge of the ECC were poorly placed to support him. The teaching of social skills to students with vision impairment is critical, and "can often mean the difference between social isolation and a satisfying and fulfilling life as an adult" (Sapp & Hatlen, 2016), but Nick's teachers, with no input from VT's were ignorant of the necessity to support social skill development. The lack of overall school commitment to inclusion found in this study is concerning, and it appears that a paradigm shift is required at the school for a student with vision impairment to experience inclusion. If Nick had attended a school with other students with vision impairment in attendance, teachers there may have had a greater understanding of his particular needs, enhancing his chance of an inclusive education.

## **Recommendations**

While acknowledging the limitation of a single case, by looking at the experiences of a student with vision impairment attending a mainstream secondary school we are made aware of the numerous difficulties he faced in obtaining an inclusive education, with bullying noted as significant. The effect bullying may be having on the academic achievement of students

with vision impairment, and students with disability generally must be considered seriously if we are to challenge any exclusion of these students from school and the work force. How the school community can be managed by teachers to create social ecologies to support students with vision impairment must be addressed. Social dynamics that contribute to peer victimization need to be understood so they can be addressed and appropriate intervention undertaken. Universal programs as well as individual focused strategies within the school community need consideration. Further research into the effect of bullying on the inclusive education of students with vision impairment is critical, as the cost to individual students and to the community cannot be ignored.

## References

- Agran, M., Blankenship, K. & Hong, S. (2007). Promoting the self-determination of students with visual impairments: Reducing the gap between knowledge and practice. *Journal of Visual Impairment & Blindness*, 101, 452-464.
- Armstrong, D. (2005) Reinventing “inclusion”: New Labour and the cultural politics of special education. *Oxford Review of Education*, 31(1), 135–51.
- Australian Curriculum. (2015). *Student Diversity*. Retrieved from [www.Australiancurriculum.edu.au/studentdiversity/students-with-disability](http://www.Australiancurriculum.edu.au/studentdiversity/students-with-disability)
- Batsche, G. M. & Knoff, H. M. (1994). Bullies and Their Victims: Understanding a Pervasive Problem in the Schools. *School Psychology Review*, 23(2), 165-174.
- Bauman, S. & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology*, 98, 291-231.
- Brocki, J. M. & Wearden, A. J. (2007). A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology & Health*, 21(1), 87-108.
- Cassidy, E., Reynolds, F., Naylor, S. & De Souza, L (2011). Using interpretative phenomenological analysis to inform physiotherapy practice: An introduction with reference to the lived experience of cerebellar ataxia, *Physiotherapy Theory and Practice*, 27, 263-277.
- Commonwealth of Australia. (2009). *Shut Out: The Experience of People with Disabilities and Their Families*. Retrieved from [www.dss.gov.au/our-responsibilities/disability-](http://www.dss.gov.au/our-responsibilities/disability-)

andcarers/publications-articles/policy-research/shut-out-the-experience-of-people-withdisabilities-and-their-families-in-australia

Commonwealth of Australia. (2014). *Disabilities discrimination act 1992*. Retrieved from [www.legislation.gov.au/Details/C2014C00013](http://www.legislation.gov.au/Details/C2014C00013)

Commonwealth of Australia. (2016). *Disabilities standards for education 2005*. Retrieved from <http://education.gov.au/disability-standards-education>

Commonwealth of Australia. (2016a). The Senate Report: Access to real learning: the impact of policy, funding and culture on students with disability. Retrieved from [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Education\\_and\\_Employment/students\\_with\\_disability/Report](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/students_with_disability/Report)

Curtin, M. & Clarke, G. (2005). Listening to young people with physical disabilities' experiences of education. *International Journal of Disability, Development and Education*, 52(3), 195–214.

Curtis, K. & Reed, M. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment & Blindness*, 105(9), 548-557.

Dane-Staples, E., Lieberman, L., Ratcliff, J. & Rounds, K. (2013). Bullying experiences of individuals with visual impairment: The mitigating role of sport participation. *Journal of Sport Behavior* 36(4), 365

DeCarlo, D. K., McGwin, G., Bixler, M. L., Wallander, J. & Owsley, C. (2012). Impact of Pediatric Vision Impairment on Daily Life: Results of Focus Groups. *Optometry and Vision Science* 89, 1409-1416.

Fade, S. (2004). Using interpretative phenomenological analysis for public health nutrition and dietetic research: A practical guide. *Proceedings of the Nutrition Society*, 63(4), 647-653.

Farmer, T., Wike, T. L., Alexander, Q. R., Rodkin, P. C. & Mehtaji, M. (2015). Students with disabilities and involvement in peer victimization: Theory, research, and considerations for the future. *Remedial and Special Education*, 36(5), 263-274.

Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of “seeing afresh”. *Journal of Humanistic Psychology*, 53(2), 172–201.

Fox, C. L. & Boulton, M. J. (2006). Longitudinal associations between submissive/nonassertive social behaviour and different types of peer victimization. *Violence and Victims*, 21, 383–400.

- Fox, C. L. & Boulton, M. J. (2005). The social skills problems of victims of bullying: Self, peer and teacher perceptions. *British Journal of Educational Psychology*, 75, 313–328
- Guide Dogs Victoria (2016). *On the Move. Guide Dogs E-Newsletter*. Retrieved from <https://www.guidedogsvictoria.com.au/>
- Hess, I. (2010). Visually impaired pupils in mainstream schools in Israel. *British Journal of Visual Impairment*, 28, 19–33.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S. & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71(2), 165-169.
- Kaukiainen, A., (2002). Anti-bullying intervention: Implementation and outcome. *British Journal of Educational Psychology*, 75(3), 465-487.
- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, M. J. & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.
- Kvale, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Los Angeles, CA: Sage Publications.
- Larkin, M., Watts, S. & Clifton, E. (2006). Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology*, 3, 102–120.
- Lifshitz, H., Hen, I. & Weisser, I. (2007). Self-concept, adjustment to blindness, and quality of friendship among adolescents with visual impairment. *Journal of Visual Impairment and Blindness*, 101(2), 1-20.
- Lohmeier, K., Blankenship, K. & Hatlen, P. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment & Blindness*, 103(2), 103-112.
- Martinko, M. J. & Thomson, N. F. (1998). A synthesis and extension of the Weiner and Kelley attribution models. *Basic & Applied Social Psychology*, 20(4), 271-284.
- Major, B., Kaiser, C. R. & McCoy, S. K. (2003). It's not my fault: When and why attributions to prejudice protect self-esteem. *Personality and Social Psychology Bulletin*, 29, 772-781.
- Messiou, K. (2012). *Confronting Marginalisation in Education: A Framework for Promoting Inclusion*. New York, London: Routledge.
- Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA).

- (2008). *Melbourne declaration on educational goals for young Australians*. Curriculum Corporation, Melbourne. Retrieved from [http://www.curriculum.edu.au/verve/\\_resources/National\\_Declaration\\_on\\_the\\_Educational\\_Goals\\_for\\_Young\\_Australians.pdf](http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf)
- National Disability Services (2012). *National disability strategy consultation Report. Shut out: The experience of people with disabilities and their families in Australia*. Retrieved from <https://www.dss.gov.au/our-responsibilities/disability-and-carers/publicationsarticles/policy-research/shut-out-the-experience-of-people-with-disabilities-and-theirfamilies-in-Australia>
- OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing. <http://dx.doi.org/10.1787/9789264130852-en>
- OECD. (2007). *Education and training policy. No more failures: Ten steps to equity in education*. S. Field, M. Kuczera & B. Pont (Eds.). Retrieved from <http://www.oecd.org/education/school/45179151.pdf>
- OECD (2010). *Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings across OECD Countries*, OECD Publishing, Paris. Retrieved from <http://dx.doi.org/10.1787/9789264088856-en>
- Olweus, D. (1993). *Bullying at school*. Oxford, England: Blackwell.
- Olweus, D. (1978). *Aggression in school: Bullies and whipping boys*. Washington, DC: Hemisphere
- Olweus, D. (2001). Peer harassment: A critical analysis and some important questions. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 3-20). New York, NY: Guilford Press.
- Olweus, D. (2010). Understanding and researching bullying: Some critical issues. In S. R. Jimerson, S. M. Swearer & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 9-34). New York, NY: Routledge.
- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International Journal of School Disaffection*, 11(2), 67-81.
- Pringle, J., Drummond, J., McLafferty, E. & Hendry, C. (2011). Interpretative analysis: A discussion and critique. *Nurse Researcher*, 18(3), 20-24.
- Prinstein, M. J. & Cillessen, A. H. N (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill-Palmer Quarterly*, 49(3), 310-342.

- Rahi, J. S., Gilbert, C. E., Foster, A. & Minassian, D. (1999). Measuring the burden of childhood blindness. *British journal of ophthalmology*, 83(4), 387-388.
- Ravenscroft, J. (2013). High attainment low employment: The how and why educational professionals are failing children with visual impairment *The International Journal of Learning*, 18 (12), 135-144.
- Ravenscroft, J. (2016). Visual impairment and mainstream education: Beyond mere awareness raising. In L. Peer & G. Reid (Eds.). *Special Educational Needs: A Guide for Inclusive Practice*. (2nd ed.). (pp. 232-250) London: SAGE
- Reid, K., Flowers, P. & Larkin, M. (2005). Exploring lived experience: An introduction to interpretative phenomenological analysis. *Psychologist* 18, 20-23
- Rodkin, P. C. & Hodges, E. V. E. (2003). Bullies and victims in the peer ecology: Four questions for school service providers and social developmental research. *School Psychology Review*, 32, 384-400.
- Roe, J. (2008). Social Inclusion: meeting the socio-emotional needs of children with vision needs. *The British Journal of Visual Impairment* 26(2), 147-158
- Sacks, S. Z. & Wolffe, K. E. (1992). The importance of social skills in the transition process for students with visual impairments. *Journal of Vocational Rehabilitation*, 2, 46-55.
- Sacks, S. Z. & Wolffe, K. E. (1998). Lifestyles of adolescents with visual impairments: An ethnographic analysis'. *Journal of Visual Impairment & Blindness*, 92, 7-17.
- Sapp, W. & Hatlen, P. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment and Blindness*, 104(6), 338-346.
- Scarpa, S. (2011). Physical self-concept and self-esteem in adolescents and young adults with and without physical disability: The role of sport participation. *European Journal of Adapted Physical Activity*, 4(1), 38-53.
- Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York, New York: Teachers College Press.
- Sekol, I. & Farrington, D. P. (2010). The overlap between bullying and victimization in adolescent residential care: Are bully/victims a special category? *Children and Youth Services Review*, 32(12), 1758-1769.
- Slee, R. (1996). Inclusive schooling in Australia? Not yet. *Cambridge Journal of Education*, 26(1), 19-32.
- Slee, R. (2011). *The irregular school: Exclusion, schooling and inclusive education*. London, England: Routledge.

- Smith, J.A. (2008). *Qualitative psychology: A practical guide to research methods*. Los Angeles: SAGE.
- Smith, J. A. (2011). ‘We could be diving for pearls’: The value of the gem in experiential qualitative psychology. *Qualitative Methods in Psychology*, *12*, 6-15.
- Smith J. A. (2017). Interpretative phenomenological analysis: Getting at lived experience. *Journal of Positive Psychology*. *12*, 303 -304.
- Smith, J., Flowers, P. & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Los Angeles: SAGE.
- Smith, J. A. & Osborn, M. (2003). Interpretative phenomenology analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 53-80) London: Sage.
- Smith, J. A. & Osborn, M. (2015). Interpretative phenomenological analysis as a useful methodology for research on the lived experience of pain. *British Journal of Pain*, *9*(1), 41-42.
- Smith A. F. & Smith J. G. (1996). The economic burden of global blindness: A price too high! *British Journal of Ophthalmology* *80*, 276-7.
- Southcott, J. & Joseph, D. (2015). Singing in La Voce Della Luna Italian women’s choir in Melbourne, Australia. *International Journal of Music Education*, *33*(1), 91-102
- Swearer, S. M. & Hymel, S. (2015). Understanding the psychology of bullying: Moving toward a social-ecological diathesis–stress model. *American Psychologist*, *70*, 344.
- Thurston, M. (2014). They think they know what’s best for me: An interpretative phenomenological analysis of the experience of inclusion and support in high school for vision-impaired students with albinism. *International Journal of Disability, Development and Education*, *61*(2), 108-118
- UNESCO. (2012). *Education: Addressing exclusion*. Retrieved from <http://www.unesco.org/new/en/education/themes/strengthening-educationsystems/inclusive-education/browse/4/>
- UNESCO. (2005). *Guidelines for inclusion: Ensuring access to education for all*. Retrieved from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>
- UNESCO (2009). *Policy guidelines on inclusion in education*. Retrieved from <http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>
- Van Cleave, J., Davis, M. M. (2006). Bullying and peer victimization among children with special health care needs. *Pediatrics*. *118*(4), 1212-1219.

Vision Australia. (2015). *Submission in response to the 2015 Review of the Disability Standards for Education 2005*. Retrieved from <https://docs.education.gov.au/node/40531>

Wolffe, K. & Kelly, S. M. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment & Blindness*, 105(6), 340-349.

World Health Organization and World Bank (2011). *World report on disability*. Retrieved from [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf)

## **Chapter 8**

### **Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment**

The first four chapters have presented single case studies of participants who experienced mainstream schooling with varying levels of exclusionary practices. James was ignored, Edward had to convince himself he was included, Alex eventually left the school because of his anxiety, and Nick was actively bullied and at the time of interview considering leaving school.

Chapter 8 returns to James, the first participant presented in Chapter 4 but focuses on the specific issues of technology, mobility and access to the curriculum. Teachers did not appear to be aware of the enormity of the task James faced in trying to keep pace with the academic workload expected of his peers, failing to provide appropriately formatted worksheets and allocating more time. The difficulty for teachers when they may only teach one student with vision impairment in their career is understandable. Teachers unfamiliar with students with disabilities may not understand how best to interact. Talking to students like James would be a first step.

**Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment**

**Jill Opie**

**Jane Southcott**

Monash University, Australia

To cite this article: Opie, J. & Southcott, J. (2016). Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment, *International Journal of Whole Schooling*, 12(2), 19-35

## **Title: Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment**

### **Abstract**

A single case phenomenological study using Interpretative Phenomenological Analysis can give voice to a student with vision impairment, exploring and developing our understanding of the experience of schooling. This article focuses on the school experience of a senior school student with vision impairment. Very few studies have looked at school experiences from a student's perspective although the belief is that through research focussing on listening to students with disabilities, their perspectives will become part of the solution to provide equity and quality in education. This single case study revealed a number of themes requiring further investigation and action before equity and quality can be achieved. Subject specific classroom issues, technology and mobility were major factors impacting on the student's academic achievement. Social issues were also found to have a profound effect.

### **Key Words**

phenomenology; single case study; vision impairment; inclusive education; disability

## **Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment**

### **Introduction**

Australia promotes the 'equal and active participation of all people with disability' in an inclusive education approach (Australian Research Alliance for Children and Youth, 2013). An inclusive educational program providing equity and quality is proactive in identifying the barriers and obstacles learners encounter and removes those that lead to exclusion (UNESCO, 2012). Educational equity recognizes that equal treatment does not equate with equal opportunity to learn (de Valenzuela, 2014). All students must be given the real possibility of an equality of outcomes, which requires recognition of their unique learning needs (Foreman, 2011; Nieto & Bode, 2012; Pearce, 2009; Sharma, Moore, Furlonger, Smyth King, Kaye, and Constantinou, 2010).

Few studies have looked at equity and quality of education offered to students with disabilities, and even more limited is research addressing the views of those with vision impairment (OECD, 2012; Whitburn, 2014a). In Australia, there are an estimated 4000 school-aged children with vision impairment attending mainstream schools (Vision Australia, 2012). The Australian Blindness Forum (2008) expresses concern that specialist intervention for students with vision impairment can be inequitable, lacking in quality, scope and outcomes. Educational research should take into account the voices of young people with disabilities (Moriña Díez, 2010; Jones, 2014), particularly in educational contexts (Ainscow, 2005; 2012; Moss, 2012, 2013). The belief is that through listening to students' voices, research highlighting their perspectives will empower and enable their more active participation in decisions made about their education (Armstrong, 2005; Curtin & Clarke, 2005; Messiou, 2012; Slee, 2011). In Australia research concluded that current education programs leave students with vision impairment without the requisite skills to cope beyond secondary education, unable to gain and retain employment or live independently (Whitburn 2014a).

In school classrooms, the majority of learning occurs through vision (Bardin & Lewis, 2008; Khadka, Ryan, Margrain, Woodhouse & Davies, 2012; Koutantos, 2000; Murray & Armstrong, 2005; Vision Australia, 2012). Full participation in classrooms requires access to print materials but for students with vision impairment this may often require alternative methods that use a prohibitively lengthy amount of time (Bardin & Lewis, 2008; Mohammed

& Omar, 2011). For many students with visual impairments an apparently lower academic standing may be a result of extra time not being available to produce work equivalent to their peers (Curtis & Reed, 2011). Visual demands increase significantly as students' progress through school with increased workload, progressive reduction of print size in books and more extensive use of worksheets (Khadka *et al.*, 2012). Social isolation of students with vision impairment limits discussion of academic work with peers involving feedback on lesson content, resources, the depth of studies, time spent on assignments, and scheduling (Opie & Southcott, 2015).

Students with visual impairments face challenges in science, technology, art and mathematics in particular as these are predominantly taught by visual means. Alternative forms of access are required (Rule, Stefanich, Boody & Peiffer, 2011) but not always available when teachers hold stereotypical views of what they can and cannot do (Norman, Caseau & Stephanich, 1998; Kumar, Ramasamy & Stefanich, 2001). With unique needs in sport and physical activities, participation limitations may be attributed to a lack of training for teachers resulting in restrictive curriculums, activities, and lesson pace. Physical educators' overprotective and discouraging attitudes and fears about the safety of students often results in substitution by alternate activities or classes (Lieberman, Houston-Wilson & Kozub, 2002). Difficulties arise from orientation and mobility, both at school and getting to school. Students are disadvantaged when using public transport and such difficulties can cause anxiety (Whitburn, 2014b).

Schools provide students with visual impairments specialist equipment including assistive technology, IT and text options. Evidence shows assistive technology is underutilized and many teachers lack adequate knowledge regarding its use (Brown, Packer & Passmore, 2013; Bryant, Bryant, Shih & Seok, 2010; Griffin-Shirley, Parker, Smith & Zhou, 2011; Whitburn, 2014c). Additionally, the use of assistive technologies can symbolise restriction, difference and dependency whereas the use of IT is found to symbolise competence, belonging and independence (Kelly, 2011; Soderstrom & Ytterhus, 2010). To fit in students with visual impairment may reject assistive technologies, shying away from accommodations that could single them out as different from their peers (Curtis & Reed, 2011; Griffin-Shirley *et al.*, 2011; Kelly, 2011; Thurston, 2014).

## Methodology

Interpretative Phenomenological Analysis (IPA) was employed in this single-case research into the insider perspectives of a student with vision impairment about his schooling. A single case study has value as it is a way to trouble our assumptions and preconceptions (Campbell, 1975), may disconfirm our expectations, and reveal the unexpected (Smith, Flowers & Larkin, 2009). With theoretical roots in phenomenology, hermeneutics and idiography IPA is involves the “researcher is engaged in a double hermeneutic ... trying to make sense of the participant trying to make sense of what is happening to them” (Smith et al., 2009, p. 3). IPA is idiographic as it explores how an individual in a given situation understands his or her lifeworld (Smith, 2011; Wagstaff, Jeong, Nolan, Wilson, Tweedlie, Phillips, Senu & Holland, 2014) and explores “the social world of the individual within their own ‘framework’” (Moran & Mooney, 2002, p. 273). In an IPA study, researchers become aware of the complex lived experiences “unique to the person’s embodied and situated relationship to the world” (Smith et al., 2009, p. 21). The analytic strategy develops “rich descriptions of how individuals think and feel about the challenges they face” (Smith, Brewer, Eatough, Stanley, Glendinning & Quarrell, 2006, p. 487). IPA offers researchers the opportunity to interpret data speculatively and consider participants’ sense making (Larkin, Watts & Clifton, 2006). When employing this approach, researchers must bracket prior understandings and assumptions and adopt a genuinely open, curious and at the same time critically self-aware stance (Finlay, 2008, 2013).

With ethical approval, this study focused on the understandings of a student with a vision impairment about his experiences of schooling and understandings of equality and equity in his education. The participant opted into the study it was made very clear to the potential participant that he was in no way obliged to take part. The school is a highly esteemed private boys’ college with a strong tradition of valuing integrity, tolerance and service, while educationally one of the highest achieving schools in the State. James was one of only three students with a vision impairment to attend this school over the past thirty years. With the permission of the participant relevant documents such as Visiting Teacher reports, State Support Services requests, Ophthalmologist reports and school reports were made available to contextualise the analysis with an understanding the student’s situation, engagement with schooling, support and academic progress.

Semi-structured interviews allowed the participant to discuss his experiences in detail (Smith, 2008). A three-interview approach was followed (Kvale, 1996, 2009; Seidman,

1998). The first interview sought to establish the context of the participant's experience of schooling. The second invited the participant to expand on his experience while the third encouraged the participant to reflect on the meaning the experiences held for him. The interviews occurred over three weeks, were each about an hour in duration and were held in a familiar space at the school. The interviews were audio recorded and then transcribed. The first stage of interview transcript analysis involved reading and rereading the interview transcripts by both authors. Seidman (1998, p. 99) notes that there is "no substitute for total immersion in the data". Marginal notes were recorded on the transcript to capture initial impressions. Subsequent readings, coding notes and compiling categories lead to the identification of emergent themes. Ultimately groupings were prioritized (Southcott and Joseph, 2015), data reported thematically, and illustrated by direct quotations from the transcripts (Larkin et al., 2006).

It is an important consideration, particularly in a single participant study, to have some reason for confidence in the authenticity and trustworthiness of the data. The decision to conduct three interviews was to provide time and opportunities for reflection by both participant and researchers. The participant was invited to co-construct and review the analysis. A range of strategies, such as code-recode and research reflection were employed to ensure trustworthy and rigorous data analysis and interpretation (Petty, Thomson, and Stew, 2012).

## **Findings**

A number of themes resulted from the analysis including orientation and mobility, equality and equity in the classroom, technology and social interaction. The first three will be considered in this article. The fourth theme was explored separately (Opie & Southcott, 2015).

### **Orientation and Mobility**

Orientation is an awareness of body in space, and mobility, the ability to move independently through space. James stated, "I got put into a space that was massive and it was that learning and realization that I could manage that has been important". James' sense of satisfaction and also surprise in his ability to overcome what he saw as the insurmountable task of negotiating the school is evident and is a reminder of the fundamental difference that exists between James and his sighted peers on entering a new environment. A lack of confidence with

mobility remained an issue throughout his schooling. James was continually late to class even after six years at the school. He had developed lateness as a safety strategy, thereby avoiding the crush around the lockers and in corridors when the bell went for class. This safety strategy was not without downfalls. James recalled,

I remember going to a class and there were no students there. I knew it was where I was supposed to go but I couldn't find the class. I just didn't notice the post-it note on the door that said: Class go to the library.

It is worth noting that no teacher or student thought to remain behind to inform James of the change. The teacher had not understood the limitations of James's vision impairment that he would be unable to read a small note left on the door even if he had seen it. This lateness strategy resulted in James missing the social interaction always occurring around the lockers at bell times. James faced unexpected obstacles and often lost things, finding packing up quite stressful, particularly when classes were hurried on to the next lesson when the bell rang. Being rushed allowed for the misconception of carelessness and disorganisation when items were invariably left behind.

James found the science laboratories could be quite dangerous He reflects:

Science was not good for me. Science is mostly a visual subject. In year 8 I was trying to observe a chemical reaction – heating a test tube over a Bunsen burner – and I got too close and singed my hair. That was a bit awkward. It was admittedly dangerous.

He was quite circumspect about such occurrences, stating that the more he used the equipment and became familiar with it the more confident he became. However, teachers appear less confident in their ability to accommodate him as he was often excused from science classes and sent to the library or education support.

Participation in sport was also affected by James's vision impairment. He states that, "many sports were hard to take part in because of the visuals of small balls on tennis courts, and footballs suddenly hitting me from a distant kick or handball." James smiled at the recollection, but no in-class solution was found. Instead alternatives were put in place, which generally involved him working alone.

In Year 9 we decided to set up a program for me in the weights room – we decided not free weights but machine weights, so I wouldn't drop them on my toes or anything

[laughs]. After that I worked through my program during PE if there wasn't something I could participate in, which was quite often.

James appeared to have a keen sense of humour and is able to laugh off difficulties associated with his vision impairment. It is also apparent that interventions, although well-intentioned, can have unexpected consequences such as isolating James from his peers. James regarded mobility as a continual difficulty of vision impairment that “sets me aside from other students”. He cited a number of occasions when he had to rely on the support of personnel from Guide Dogs<sup>2</sup>. James confirmed the importance of new technology such as the iPhone for his ability to use the public transport system when getting to and from school.

Well there is an issue with trams – there are just so many routes that I need to learn... I can't read the numbers on the trams or timetables either, but now they have a button that you can press that tells you which one is coming. But to find out what stops they actually go across I have to use my phone app to track where I am to follow the stops. I am getting better with this. It's great.

### **Equality in the Classroom**

It is apparent that a state of equality, establishing a situation where James was not disadvantaged because of his disability, did not always occur. On a number of occasions, James alluded to the impossibility of parity with other students in the classroom because he took so much longer to read worksheets, particularly when not presented in a readable format. Teachers were all aware of James' preferred format. James notes,

Teachers simply enlarged a worksheet to A3, or if they forgot just sent me to the secretary's office to photocopy it to A3. This always took a lot of time. The font is still too small and the paper size is terrible. It has to be folded and then I don't know what it is then. My locker is a mess and organization terrible.

James stated that it was not until Year 11 that teachers started to print worksheets in the format he needed, as his Year 12 examinations were “going to be produced in this format. Teachers then finally understood that is how I should be getting all worksheets”. James was not critical of his teachers, acknowledging that enlarging can be time consuming.

---

<sup>2</sup> Guide Dogs – State orientation and mobility service.

Students like James with vision impairment take longer to read a passage. He realised the unfairness of time constraints by referring to extra time given in examinations:

It takes me a lot longer to read a certain passage... For me it would take half an hour – for someone else it would take 10 minutes. And it is that 20 minutes that I lose because of my sight that I need time added on ... I do usually get more time at the end of an exam or test to make it a bit more even.

However, no extra time was available in class for James to complete everyday tasks. The classes ran to bell times and as James was expected to complete the same work as the other students, he was invariably left with work unfinished. As he says “to get a level playing field it is important for me to get more time. But this doesn’t happen”.

One strategy that assisted with class work was when the notes were emailed to James so he could read along with other students as the teacher was explaining and writing on the board. According to James “in that regard I felt I was on an even playing field. It happened with English and Media sometimes– especially at the beginning of a topic. It made a real difference”. Unfortunately, he was unable to print these out in enlarged format to produce a workbook equivalent to that of his peers. Board work remained an ongoing issue. James explained that

With things on the board I don’t think there is a way to create a level playing field with other students. I think the best way would be for teachers to know beforehand what they were going to put on the board and email it to me. Though I know this isn’t possible because things just come up in class and they write notes on the board more or less spontaneously.

### **Classroom Technology**

James concedes there was no intervention that successfully enabled notes to be taken from the board to produce a workbook in any way resembling what other students compiled. James appears very philosophical about the school’s failure to provide any effective solution. He was willing to try new options but was rather passive in their application:

In senior school with the funds they have they tried to give me the best. They tried all these resources but it just didn’t work. They weren’t to know and you just ride with it.

We just had to go through it and when one didn't work [they] tried another method ... they didn't get there ... but it's not necessarily their fault.

James did not appear to want to use interventions that made him look different from his peers. Although he appeared slightly embarrassed to admit it, image was important to him. He stated, "I haven't actually used binoculars or monocular but they were there to be used if needed. But I just thought well, this random kid putting binoculars up to his eyes is not really, you know, a good look".

In year 7 the school provided an assistive technology, ClearNote<sup>3</sup>, which could display work from the board onto his computer screen for access but.

It was just so heavy and I had to sit in front of the class, with no one beside me because it took two desks really, and it blocked people's view of the board. It took time to set up and pack away ... I was always disrupting the start of the lesson ... So, I just stopped getting it out.

This illustrates awareness by James of the needs of others, and also his desire to fit in. He felt that the machine was isolating and accentuated his difference. The teacher, while encouraging James to be independent by setting up himself, does not appear fully aware of the impact of the time this takes. The inability to quickly copy the notes from his screen was exacerbated by poor writing and underdeveloped typing skills. James's resistance regarding the use of assistive technology was apparent with the later introduction of the Mimio<sup>4</sup> which James stated,

slid down the wall...The special pens were irritating as the lids would come off and pens would dry out, which was annoying for the teachers ... They didn't really know how it worked and couldn't help when it didn't work. Sometimes the batteries would die and really, I guess I just didn't use it properly.

---

<sup>3</sup> The ClearNote HD connected to any computer produces magnified, high contrast live images of surroundings, such as presentations handouts and white boards.

<sup>4</sup> Mimio is a portable tool, which when mounted to any whiteboard, allows you to save the notes and drawings directly onto a computer.

It appears teachers did not appreciate the potential value of this device and did not actively engage with this technology. For James, the greatest difficulty was the amount of extra work created when he did download notes from the board. He explained:

It became just a bit much as once the images had been taken from the board I had to convert the text from the images into a word document by writing the notes out.

Sometimes I would end up with all these images I had taken but not filed so I had to go through them to find the work I wanted and it just wasn't very useful for me.

When James did use the Mimio he needed to virtually redo the class. He stated that:

Only really at the beginning did I try to type up the notes from the images and keep them in order. It just seemed an extra step to type out the notes again. It was like I had to do a day's work again for homework, before I even got to my homework. So, I didn't really. I'm not really good at keeping my files in order at all so I would not recommend the Mimio. Not at all.

Tape recording of classes was a similar issue. James tried to record Indonesian lessons but soon stopped because listening to 40-minutes of footage "was basically going through the classes again and having a whole other day at school ... I felt trying things was a good thing but just didn't find anything that really worked for me".

There were also difficulties with online texts, particularly the mathematics text as, for James, it is hard finding pages and going back to questions but I can work it out. It just takes a lot more time. I can't get the same number of questions done as the others but the teacher still expects it.

James felt that in his Victorian Certificate of Education subject Business Management, where the teacher presented the notes to the class using PowerPoint and emailed James a copy, he received the closest thing to having class notes. Although other students added to the PowerPoint notes as the teacher wrote extra on the board, James simply listened. The PowerPoint also listed reference pages and work to do, so was invaluable to James, although organisation of the files on the computer remained challenging. That this worked for him is apparent, as it was his best result of all his year 12 examinations.

## Discussion

James' school reports recorded comments such as a tendency to procrastinate effecting delivery of work on time; lack of organization and planning application preventing him from producing his best work, outcomes being compromised by failure to complete all coursework, and workload a challenge. Teachers were aware of James not fulfilling their expectations for classwork and homework but did not appear aware of the enormity of the task he faced in trying to keep pace with the same academic workload expected of his peers such as time issues. Being more knowledgeable about assistive technology and providing appropriately formatted worksheets may have alleviated some of the difficulties. Teachers may have been unaware of how real the need was for appropriate enlargement, as James was quite accepting of this situation. It was almost as if it gave him an excuse not to perform that well. Also, teachers were a major source of social interaction and it appears he may not have wanted to offend them by making requests (Opie & Southcott, 2015). Teachers appear to have been unable to fulfil their obligation to provide equitable educational experiences. Limited training in inclusion and disability, combined with inadequate specialist input, planning time, and technology training pose a serious challenge for teachers to implement inclusion for students with vision impairment (Brown, Packer & Passmore, 2013). Many assistive technologies for the classroom were tried, but James never found suitable methods for him that allowed easy access to what was written on the board without excessively increasing his workload. Travelling on public transport to school and school events, improved for James with his use of his iPhone.

James developed a few strategies to assist with his survival in the school environment. His strategy to deal with crowds of students in the corridors was one of avoidance, but this resulted in further isolation from other students. James was not expected to participate fully in science and sport in particular. He accepted the alternatives provided, although he obviously enjoyed participating in swimming and athletics, eager to be involved. He enjoyed the camaraderie he experienced and had a strong desire be included when he could participate on equal terms, even when his personal success was limited. The exclusion of students with vision impairment in science and sport, well documented over the years, remains a concern (Haegele & Porretta, 2016; Supalo, Isaacson & Lombardi, 2013; Lieberman, Houston-Wilson & Kozub, 2002; Kumar, Ramasamy & Stefanich, 2001; Perkins, Columna, Lieberman & Bailey, 2013; Taliaferro, Hammond & Wyant, 2015).

When reflecting on James's struggle to read and comprehend material at the same rate as other students, his difficulty organizing his work when consistently being given work on A3 paper, his problem keeping track visually of his belongings, his inability to manage the pace and workload of his peers and his inability to compensate with more work at home, there was a sense that teachers did not fully realise what James was having to cope. Time was problematic. James felt little leeway was given and teachers had the same expectations of him as for his peers. While educationally this may be a sound approach, encouraging independence, for James it appears teachers may have misread the situation as demonstrated by his term reports. It was reported that James had a tendency to procrastinate, yet James may simply have been taking longer to read and interpret given material (Bardin & Lewis, 2008; Mohammed & Omar, 2011). It was reported that he was disorganized, but this may have exemplified the difficulties faced by a student with vision impairment in trying to keep track of equipment and of unwieldy handouts when rushed from classroom to classroom. It appears it was unreasonable to expect James to complete the same workload as sighted students with no modification. General teachers who have students with disabilities in their classrooms may have the expectation that someone else has the responsibility for a student's education (Giangreco, Dennis, Cloninger, Edelman & Schattman, 1993).

The school provided extensive support, including experiences in all aspects of the expanded core curriculum (Hatlen & Sapp, 2010; Blankenship, Hatlen & Lohmeier, 2009; Department of Education Western Australia, 2010), but total equity appeared not to be possible. The difficulty of providing an inclusive program relevant to all alongside the essential additional curriculum outlined in the ECC is challenging for a teacher "given the time restraints of the school day" (Wolffe & Kelly, 2011, p. 341). A method to overcome the vastly extended workload a student with vision impairment faces in producing the same class notes, and completing the extensive reading component, classwork and homework managed by peers, was not found. Where some areas of the curriculum were problematic for the James, he was excused from lessons rather than lessons being altered to meet his needs. While the student was proud of his achievements at the school the experience was not easy for him academically or socially.

## **Conclusions: Implications for Practice**

The difficulty for teachers when they may only teach one student with vision impairment in their career is appreciated. Teachers require a basic understanding of the needs of students with vision impairment, whether as part of their teacher training or a unit taken when a teacher becomes aware they will have a vision impaired student in their class. Knowledge of time difficulties, current assistive technology and IT innovations, ECC expectations, and an awareness of social, subject-specific and orientation and mobility issues should be addressed. The Visiting Teachers for the Vision Impaired could take a greater role as advocate for the student. Expectations of teachers and accommodations required by the student should be detailed. Producing worksheets in the preferred format, dealing with time issues by reducing the workload without compromising academic content, keeping abreast of technological aides and gaining a clearer understanding of social issues are just a few areas that could be expounded.

While technology such as the Mimio and the ClearNote did not work well for James it may for others, enabling students' access to what is written on the board. Had his typing skills not been constrained, James may have been able to type notes from the board using Mimio or ClearNote images while other students were writing them. Not all students with vision impairment will have the same difficulties, but an awareness of these may prevent inequities. It is important that teachers are kept abreast of developments in technology that may support students with a vision impairment.

Sport teachers should include more games and activities in which students with vision impairments can compete on an equal footing. Teachers of the sciences could look to technology and the use of podcasts for those practical experiments they feel too dangerous for the student to participate in, keeping in mind the reality that students will need to learn to cope with many situations in life. Effort needs to be made to ensure academic isolation does not exist for the student with vision impairment to foster equity. The issue of social isolation and subsequent limited access to peer collaboration could have considerable ramifications to the academic success of the student (Opie & Southcott, 2015).

Victorian schools are bound by the State examination requirements at Year 12. Although special provisions are available to students with disabilities taking the examinations, these requirements 'enable the student to complete their examination/s on the same basis as students who do not have a disability/illness' ensuring no advantage is given (Victorian Curriculum Assessment Authority, 2014). The extra time allowance of 10 minutes

an hour was inadequate for James, and failed to see the extent to which students with vision impairment are expected to 'be the same' when inclusion is about accepting diversity. Inclusion involves abandoning the idea of 'making normal' children who experience disability (Goodley & Runswick-Cole, 2011). Inclusion requires transforming educational systems rather than changing children to fit within current, exclusionary, systems. (Forlin, 2010; Jordan, Glenn & McGhie-Richmond, 2010; Thomazet, 2009; Whitburn, 2014b). Examinations are an assessment of understanding and knowledge, and for students with vision impairment equity in this may mean more flexibility is required. Australian teachers and parents report that the underlying systems to support inclusion such as teacher training (Loreman, Deppeler & Harvey, 2005; Slee, 2010) and teacher support (Loreman & Deppeler, 2001) remain insufficient.

This single participant study has revealed a number of issues in the provision of an equitable inclusive experience for a student with vision impairment. Included are the difficulties associated with having very few students with vision impairment attending a school over a number of years, teacher inexperience with students with vision impairment, limited access and proactivity of specialist visiting teachers, perpetuating subject specific issues, IT undervalued and underutilized, inaccessibility of worksheets and continuing time issues. It is clear that there is still a long way to go in establishing equity and quality for all students.

## References

- Ainscow, M. (2005). Developing inclusive education systems: what are the levers for change? *Journal of Educational Change*, 6, 109–24.
- Ainscow, M. (2012). Moving knowledge around: strategies for fostering equity within educational systems. *Journal of Educational Change*, 13(3), 289–310.
- Armstrong, D. (2005). Reinventing 'inclusion': New Labour and the cultural politics of special education. *Oxford Review of Education*, 31(1), 135-51.
- Australian Blindness Forum (ABF) (2008). *Improving life for people who are blind or vision impaired: Education and children's services*. Retrieved online

[www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc](http://www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc)

- Australian Research Alliance for Children and Youth (2013). *A National Plan for Child and Youth Wellbeing*. Retrieved online [www.aracy.org.au/projects/the-nest/the-nest](http://www.aracy.org.au/projects/the-nest/the-nest)
- Bardin, J. A. & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness*, 102, 472-483.
- Blankenship, K., Hatlen, P. & Lohmeier, K. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment & Blindness*, 103(2), 103-112.
- Brown, C. M., Packer, T. L. & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education*, 46(4), 223 - 232. DOI: 10.1177/0022466910397374
- Bryant, B. R., Bryant, D. P., Shih, M. & Seok, S. (2010). Assistive technology and supports provision: A selective review of the literature and proposed areas of application. *Exceptionality*, 18(4), 203-213. doi: 10.1080/09362835.2010.513925
- Campbell, D. T. (1975). Degrees of freedom and the case study. *Comparative Political Studies*, 8, 178-193.
- Curtin, M. & Clarke, G. (2005). Listening to young people with physical disabilities' experiences of education. *International Journal of Disability, Development and Education*, 52(3), 195–214.
- Curtis, K. & Reed, M. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment and Blindness*, 105(9), 548-557.
- de Valenzuela, J. S. (2014). Sociocultural Views of Learning. In L. Florian (ed.), *The Sage Handbook of Special Education*. London, UK: SAGE Publications.
- Department of Education Western Australia (2010). *The Expanded Core Curriculum*. Retrieved online. [det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626](http://det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626)
- Finlay, L. (2008). A dance between the reduction and reflexivity: explicating the “phenomenological psychological attitude”. *Journal of Phenomenological*

- Psychology*, 39, 1–32.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of “seeing afresh”. *Journal of Humanistic Psychology*, 53(2) 172–201.
- Foreman, P. (2011). Introducing inclusion in education. In P. Foreman (ed.), *Inclusion in Action* (3rd ed., 2-34). South Melbourne, VIC, Australia: Cengage.
- Goodley, D. & Runswick-Cole, K. (2011). Problematizing policy: Conceptions of ‘child’, ‘disabled’ and ‘parents’ in social policy in England. *International Journal of Inclusive Education*, 15(1), 71-85.
- Griffin-Shirley, N., Parker, A. T., Smith, D. W. & Zhou, L. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105, 533-538
- Hatlen, P. & Sapp, W. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment and Blindness*, 104, 338-348.
- Jones, P. (2014). *Bringing Insider Perspectives into Inclusive Teacher Learning: Potentials and Challenges for Educational Professionals*. New York, NY: Routledge.
- Jordan, A., Glenn, C. & McGhie-Richmond, D. (2010). The supporting effective teaching (set) project: The relationship of inclusive teaching practices to teachers' beliefs about disability and ability, and about their roles as teachers. *Teaching and Teacher Education*, 26(2), 259-266.
- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment & Blindness*, 105, 236-243.
- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, M. J. & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Koutantos, D. (2000). A survey of children with VIMI in special schools in Crete. *British Journal of Visual Impairment*, 18(2), 73-77.
- Kumar, D. D., Ramasamy, R. & Stefanich, G. P. (2001). Science for students with visual impairments: Teaching suggestions and policy implications for secondary educators. *Electronic Journal of Science* 5(3)

- Kvale, S. (1996). *Interviews : An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA : Sage Publications.
- Kvale, S. (2009). *Interviews : Learning the Craft of Qualitative Research Interviewing*. Los Angeles, CA : Sage Publications.
- Larkin, M., Watts, S. & Clifton, E. (2006). Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology*, 3, 102–120.
- Lieberman, L., Houston-Wilson, C. & Kozub, F. (2002). Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly*, 19(3), 364-377.
- Messiou, K. (2012). *Confronting Marginalisation in Education: A Framework for Promoting Inclusion*. New York, London, UK: Routledge.
- Mohammed, Z. & Omar, R. (2011). Comparison of reading performance between visually impaired and normally sighted students in Malaysia. *British Journal of Visual Impairment*, 29(3), 196-207.
- Moran, D. & Mooney, T. (2002). *The Phenomenology Readers*. London, UK: Routledge.
- Moriña Díez, A. (2010). School memories of young people with disabilities: an analysis of barriers and aids to inclusion. *Disability and Society*, 25(2), 163–75.
- Moss, J. (2012). Curriculum, visibility and educational research. *ROSE Professorial Lecture Series Julianne Moss, Deakin University June, 4, 2012*.
- Moss, J. (2013). Visual research methods in education: In between difference and indifference. *International journal on school disaffection*. 10(2), 63-77.
- Murray, I. & Armstrong, H. (2005). *Teaching Sight Impaired IT Students* Proceedings of Educause 2005, Auckland, NZ.
- Nieto, S. & Bode, P. (2012). *Affirming Diversity* (6<sup>th</sup> ed.). Boston, MA: Pearson
- Norman, K., Caseau, D. & Stephanich, G. P. (1998). Teaching students with disabilities in inclusive science classrooms: survey results *Science Education* 82 127-146
- OECD (2012). *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*. OECD Publishing, Paris. Retrieved online.  
<http://dx.doi.org.ezproxy.lib.monash.edu.au/10.1787/9789264130852-en>

- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International journal on school disaffection* (In press)
- Pearce, M. (2009). The inclusive secondary school teacher in Australia. *International Journal of Whole Schooling*, 5, 1-10.
- Petty, N. J., Thomson, O. P. & Stew, G. (2012). Ready for a paradigm shift? Part 2: introducing qualitative research methodologies and methods. *Manual Therapy*, 17(5), 378-384.
- Rule, A. C., Stefanich, G. P., Boody, R. M. & Peiffer, B. (2011). Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, 33(6), 865-887.
- Seidman, I. (1998). *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York : Teachers College Press.
- Sharma, U., Moore, D., Furlonger, B., Smyth King, B., Kaye, L. & Constantinou, O. (2010). Forming effective partnerships to facilitate inclusion of students with vision impairments: Perceptions of a regular classroom teacher and an itinerant teacher. *British Journal of Visual Impairment*, 28(1), 57-67
- Slee, R. (2011). *The Irregular School: Exclusion, Schooling and Inclusive Education*. London, England: Routledge.
- Smith, J. A. (2008). *Qualitative psychology : A Practical Guide to Research Methods*. Los Angeles: SAGE.
- Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis'. *Health Psychology Review* 5(1), 9–27.
- Smith, J. A., Brewer, H. M., Eatough, V., Stanley, C. A., Glendinning, N. W. & Quarrell, O. W. J. (2006). The personal experience of juvenile Huntingdon's disease: an interpretative phenomenological analysis of parents' accounts of the primary features of a rare genetic condition. *Social and Behavioral Research in Clinical Genetics*, 69(6), 486-496.
- Smith, J., Flowers, P. & Larkin, M. (2009). *Interpretative Phenomenological Analysis: Theory, Method and Research*. Los Angeles: SAGE.

- Söderström, S. & Ytterhus, B. (2010). The use and non-use of assistive technologies from the world of information and communication technology by visually impaired young people: A walk on the tightrope of peer inclusion. *Disability & Society* 25(3) 303-315
- Southcott, J. & Joseph, D. (2015). Singing in La Voce Della Luna Italian women's choir in Melbourne, Australia. *International Journal of Music Education*, 33(1), 91-102
- Thomazet, S. (2009). From integration to inclusive education: does changing the terms improve practice? *International Journal of Inclusive Education*, 13(6), 553-563.
- Thurston, M. (2014). "They think they know what's best for me": An interpretative phenomenological analysis of the experience of inclusion and support in high school for vision-impaired students with albinism. *International Journal of Disability, Development and Education*, 61(2), 108-118.
- UNESCO (2012). *Education: Addressing exclusion*. Retrieved online <http://unesdoc.unesco.org/images/0021/002170/217073e.pdf>
- Vision Australia (2012). *Supporting Children who are Blind or have Low Vision*. Retrieved online. [www.visionaustralia.org/living-with-low-vision/children's-services](http://www.visionaustralia.org/living-with-low-vision/children's-services)
- Victorian Curriculum and Assessment Authority (2014). *VCE and VCAL Administrative Handbook*. Retrieved online [www.vcaa.vic.edu.au/Documents/handbook/2014/13-AdminHB-2014-Special-Provision.pdf](http://www.vcaa.vic.edu.au/Documents/handbook/2014/13-AdminHB-2014-Special-Provision.pdf)
- Wagstaff, C., Jeong, H., Nolan, M., Wilson, R., Tweedlie, J., Phillips, E., Senu, H. & Holland, F. (2014). The Accordion and the Deep Bowl of Spaghetti: Eight researchers' Experiences of Using IPA as a Methodology. *The Qualitative Report*, 19(47), 1-15.
- Whitburn, B. (2014a). Accessibility and autonomy preconditions to 'our' inclusion: a grounded theory study of the experiences of secondary students with vision impairment. *Journal of Research in Special Educational Needs*, 14(1), 3-15.
- Whitburn, B. (2014b). The 'inclusion' of students with vision impairments: Generational perspectives in Australia. *International Journal of Whole Schooling* (10), 1-18.
- Whitburn, B. (2014c) 'A really good teaching strategy': Secondary students with vision impairment voice their experiences of inclusive teacher pedagogy'. *British Journal of Visual Impairment*, 32(2), 148-156.

## **Chapter 9.**

### **‘You have to be like everyone else’: Support for students with vision impairment in mainstream secondary schools**

This article expands on the issue of support from the perspectives of all seven participants with vision impairment in the study. Although some positive experiences were evident, the overwhelming feeling of participants was of inadequate and inconsistent support from aides in particular and from teachers in general. Interviewees felt that aides were present in the classroom too often and were intrusive. Further, they expressed concerns that aides were not academic enough or expert enough in knowing how best to help someone with vision impairment.

Aides and teachers of the participants appeared to have only a basic knowledge of the assistive technology the students used, so were unable to assist when there were problems. With the rapid increase in available technologies available to students, better IT support is essential. Stereotypical views by teachers and aides meant students were often excluded from science and other activities. To cover for insufficient availability of VT support, teachers need not only more training in vision impairment but a willingness to be more collaborative with VTs, teachers, aides, parents and most importantly the student.

## **‘You have to be like everyone else’: Support for students with vision impairment in mainstream secondary schools**

### **Abstract**

The experiences of seven Australian senior secondary students with vision impairment attending mainstream schools in Victoria were explored to gain an understanding of the support mechanisms operating to allow them access to an inclusive education. This qualitative study primarily used the in-depth interviews of students, augmented by brief interviews with Heads of Education Support, parents, aides and teachers. Students attributed difficulties to time available, accessing e-print and large format materials, assistive technology and access, and exclusion from classes of science, mathematics, and physical education in particular. In Australia, there is an expectation that legally mandated adjustments for students with disabilities will enable equitable, quality, and inclusive education. This was not evident in the experiences of the students in this study. Having aide support did not prevent exclusionary practices. Educators and support staff need to understand the perspectives of students with vision impairments to better facilitate successful teaching and learning experiences.

### **Key Words**

vision impairment, disability, qualitative study, inclusion, aides, education support.

## **Are the adjustments provided for students with vision impairment enabling their inclusive educational experience?**

Australia has the obligation to ensure that inclusive education is available to all children as mandated in legislation (e.g. Disability Discrimination Act, 1992, and Disability Standards for Education, 2005; Commonwealth of Australia, 2014; 2016) and policy (e.g. Australian Curriculum, Assessment and Reporting Authority, ACARA, 2013). The Disability Standards for Education (2005) support the rights of students with disability, and provide a framework to ensure that students with disability 'are able to access and participate in education on the same basis as other students' (Commonwealth of Australia, 2016. p. iii). Teachers have an obligation to ensure that 'all students with disability are able to participate in the Australian Curriculum through rigorous, meaningful and dignified learning programs' (ACARA, 2013, p. 10).

To ensure a student can participate in the learning experiences, adjustments may be required. An 'adjustment' to the curriculum, instruction or environment is a measure or action taken to assist a student with disability to participate in education and training on the same basis as other students (ACARA p. 9). The use of support personnel such as an aide is regarded as an environmental adjustment. Before making an adjustment, the student and parent must be consulted (ACARA p 11). Australian states and territories all have policies that further explicate these principles. The Department of Education and Training (DET) (2016) in Victoria states that it is 'committed to delivering an inclusive education system that ensures all students have access to a quality education that meets their diverse needs' (p. 1). Evidence suggests, however, that what is espoused in these legislative and policy frameworks regarding equity are not consistent with what is enacted and experienced by students with disabilities (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013). For these students, accessing and participating in education remains one of the most significant challenges encountered in childhood (Children with Disability Australia, 2015 p. 3). As stated in the Commonwealth of Australia (2016a) Senate Report 'although education is an accepted basic human right, for many students with disability in Australia, it is a right which they are prevented from accessing' (p. 3). The senate committee received overwhelming evidence regarding the many barriers faced by Australian students with disability, with one submission

to the committee, likening access to quality education when you are a student with a disability to that of ‘winning the lottery’ (Senate Report, p. 20).

Globally, and as in Australia, a primary strategy to support students with disability is to engage an extra adult to support the learning of these students under guidance of their teacher. In this paper, we use the term *aide* to represent those variously described persons in this role such as teacher aide, classroom assistant, teacher assistant and support officer. We do not include the trained visiting teacher (VT) who provides intermittent specialist expertise for students with vision impairment.

Vision impairment is a low incidence disability in Australia affecting an estimated 4000 students, most of whom attend mainstream schools with the expectation of a quality education with adjustments available for fairness and equity, ensuring their disability is not an obstacle to their learning (Australian Curriculum, 2015; Cox & Dykes, 2001; DET, 2016). Their adjustments may include adjustment of curriculum delivery and assessment strategies, the provision of materials in accessible formats, the provision of specialized assistive technology and computer software and facilitated by aides. There are indicators that the support for students with vision impairment is exclusionary (Commonwealth of Australia, 2009, 2016a), impacted by a lack of access to appropriately qualified and skilled support (Commonwealth of Australia, 2009; Vision Australia, 2015). Typically, the aide is the person responsible for administering the adjustments for these students. In Australia, there are no minimum educational requirements for aides. Aides may choose to complete courses offered through the Vocational Education and Training (VET) sector but it is not a prerequisite to their employment (Victoria State Government, Education and Training, 2016). Notably, in the review Shut Out, (Commonwealth of Australia, 2009) the education system was characterised as chronically under-funded and ‘staffed by teachers who received little or no training with regard to disability’, with ‘widespread ignorance and fear of disability and little or no promotion of the benefits of inclusion’ reported (p. 6).

Key international research also identifies aides to be the ‘primary mechanism’ to support students with disabilities in schools (Giangreco, Broer, and Suter, 2011, p. 25) with concerns regarding the effectiveness of their support expressed (Webster & Blatchford, 2015). Aides are increasingly expected to take on instructional roles for which they are not necessarily educated or well prepared (Butt and Lowe, 2011; Harris & Aprile, 2015), resulting in concern for the effectiveness of their academic work with students (Farrell, Alborz, Howes & Pearson, 2010), the isolation of students from their peers, and the reduction of direct interaction with their teacher (Tews & Lupart, 2008; Webster, Blatchford, Bassett,

Brown, Martin & Russell, 2010). Relatively little research on aides has been conducted in Australia, although similar concerns have been expressed. Shaddock, Neilson, Giorcelli, Kilham & Hoffman-Raap (2007) noted a predisposition to ‘velcro’ a teacher aide to a child (p. 210), while Whitburn (2013) quoted a student as stating ‘you’re in mainstream with a chaperone. It’s like, going to a party with your parents, or something’ (p. 153).

The aim of this study was to explore how effectively students with vision impairment were supported in order that they experience an inclusive education. This paper focuses on students’ experiences regarding their support. Very little research on vision impairment has sought student views regarding their support. The World Report on Disability (WHO & World Bank, 2011) states that referral to the experience of impairment is essential in determining barriers, with the recommendation to ‘consult and involve children in decisions about their education’ (p. 227). Students need to voice their experiences in order to increase understanding of how the support given is facilitating their inclusive education. Evidence from teachers, aides, parents and students’ school documentation was also used in this case study.

## **Methods**

Qualitative researchers are interested in understanding how people make sense of their world and the experiences they have in it (Merriam, 1998). Merriam notes, ‘research is ...producing knowledge about the world - in our case, the world of educational practice’ (Merriam, 1998, p. 3) and from her perspective ‘the key philosophical assumption upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds’ (Merriam, 1998, p. 6). Merriam conceives qualitative case study as ‘an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit’ (1998, p. xiii) stressing its unique distinctive attributes as particularistic (focussing on particular situation, event, program, or phenomenon), descriptive (yielding a rich, thick description of the phenomenon under study) and heuristic (illuminating the reader's understanding of phenomenon under study) (Yazan, 2015). Researchers construct their analyses through iterations of experiences and reflexivity (Stake, 1995). Merriam (1998) defines the process of data analysis as sense making which ‘involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read’ (Merriam, 1998, p. 178). Data validation requires that ‘the qualitative study provides the reader with a depiction in enough detail to show that the

author's conclusion 'makes sense' (Merriam, 1998, p. 199), increasing the credence of their interpretation.

Underpinned by phenomenology, intensive qualitative analyses of the detailed personal accounts derived from in-depth, semi-structured interviews of each student participant were undertaken (Kvale, 1996, 2009). Heads of Education Support (HoES), teachers, aides and parents were also briefly interviewed, audio recorded, transcribed and analysed for germane insights. Data from all sources offer triangulation. An interpretative analysis of the students' interviews was undertaken, with interview data coded independently by researchers, and emergent themes identified before meeting together to negotiate shared understanding of the data. Maintaining an open and curious position, researchers composed a narrative of data extracted primarily from the interviews of the students interspersed with data from teachers, HoES, aides, and parents relevant to the question of whether the support /adjustments made for students with vision impairment attending mainstream schools enabled their experience of an inclusive education.

## **Participants**

The primary participants and main focus of this study were senior secondary students with vision impairment who attended mainstream Victorian schools. Ethical approval was given to conduct this study, and participants were recruited via a request in the Guide Dog Victoria newsletter seeking participants interested in opting into the study. Guide Dogs (Guide Dogs, 2016) are a widely-accessed provider of both mobility instruction to students and safety guidelines for schools. Seven participants ranging in age from seventeen to nineteen opted into this study. Students attended five different secondary schools in Victoria, three of which were fee-paying private schools and two state schools. In terms of classification for funding, Edward, Nick, Steve, Holly and Alex are legally blind, and James and Emma vision impaired. Holly is the only student who consistently uses braille. In addition, eight teachers, three aides, three Heads of Educational Support (HoES), and two parents were asked and were keen to participate in the study.

## **Findings**

After detailed analysis of each student's interviews, the theme of support, highlighted by all students, was reported under three common headings. Findings were augmented from the

revelations of teachers, aids and parents. The headings are: ‘There’s never enough time’; ‘I really struggle to access the work’; and Teacher and Aide support and training.

### **‘There’s never enough time’**

All student participants emphasised their need for extra time to complete set work, but expressed their frustration that adjustments in this area were not provided. Alex noted that, ‘They expect me to do things on time but they don’t give me the time.’ Nick repeatedly asked for more time but it was only accepted by the HoES at his school when, on enquiring to the Victorian Curriculum and Assessment Authority regarding allowances for state examinations, she found ‘Nick was entitled to 50 percent extra time’. She informed the teachers about his right to extra time, but this was not carried through into the classroom. Nick stated, ‘Time is an important issue for me. But this doesn’t happen [in class].’ The expectation that Nick and others in this study can complete tasks in the same time as that given to their peers proved to be a pernicious circumstance and particularly difficult when work was not presented in the preferred learning format.

Practical issues also impact on time. As one parent commented, ‘they move from classroom to classroom all the time and he has to pack up and reassemble all his equipment all the time.’ When asked, all teachers interviewed stated the student with vision impairment ‘is unable to complete all the set tasks in the class time available.’ An aide also commented ‘it is just the pace.’

### **‘I really struggle to access the work’**

Students recounted experiencing inflexibility and intransigence as teachers and aides tried to impose the ‘standard’ or ‘normal’ way of working in classrooms or in the broader school, citing an unwillingness for adjustments to be made regarding rules and regulations, time, examination practices, print materials, support assistive technology, access to some subjects, and general participation. At the beginning of the year, every participant sent a vision statements to their teachers in which they explained their abilities and limitations, and asked for materials to be available in accessible ways. All students wanted worksheets and notes sent as emails, preferably prior to a class allowing access to this work at the same time as other students, but this was a rare occurrence. A common complaint was that staff would simply enlarge worksheets to A3 which all students disliked. As Emma declared, ‘I just find A3 really, really, annoying to deal with. ... I prefer getting things in a bigger font size but

still A4 if they can't email it to me', and James asserted the text was too small and paper size terrible for note collation, as it had to be folded to be put away. Nick's aide stated that

He just gets worksheets blown up to A3. He says it can be hard to see. He doesn't really like the big sheets, and they are a problem having to fold them and then not know what they are.

She failed to resolve this issue, and acknowledged that even enlargements were not always ready for him, which added to the time issue. She stated

If I have to dash out and photocopy a worksheet for him, he is that little bit behind, and sometimes he takes that as an excuse not to, you know, start on something.

Emma, when studying history, experienced hardship because of the lack of adjustment when a reading pack of photocopies from university textbooks was formatted two pages to one page, making the text extremely small. Very frustrated, she 'finally said again to my teacher, would you please [emphasis] format it differently for me ... because I really struggle...with eye fatigue as I am straining to read for hours, and I get headaches and neck problems.' Students continually reminded teachers of their need to have work presented in an accessible format, but to no avail. As James said, 'I keep asking, but there is no improvement'. Nick also experienced academic challenges when the assigned work was not appropriately presented in a timely manner, stating,

Sometimes ... I have to wait an extra 10 minutes to get it copied [which is] while the teacher goes through explaining all of it, the main points and what you have to do. And for those 10 minutes I'm still listening, but I don't have a copy to follow ... I don't have a copy to follow and mark. So, it's hard.

Accessing material from the board was also challenging for students. Emma's English teacher would write things on the board but not verbalise as she wrote, generating her reliance on other students. Emma explained,

I can never read them and it is really annoying. I just wish she would always dictate as she is writing ... so I have a friend next to me whispering in my ear what she is writing so I can take those notes.

Students used various techniques and assistive technologies to try and access work written from the board, including cameras, Mimios (a device to record images from the board onto a computer), monoculars, and iPad. Steve was quite adept at using his monocular but was the only student to use this method. James did not think it was a ‘good look.’ Using assistive technology students were able to download the image from the board onto their computer. A parent’s comment, which reflected the view of most students, was that ‘typing up notes from the downloads is like he has to do the whole class again, even before getting down to other set homework. He gets home, he is already exhausted.’ Some students confessed to being quite good at filing their images into subject folders, but did not find the images as easy to access as peers could access notes from their workbooks. The most effective means of obtaining notes appeared to be when the whole class was presented the notes as a PowerPoint. Then the students felt equal to their peers as they could easily download and follow along as the teacher discussed the presentation. As noted by James, he was able to read with the others, participate in the discussion and then have the same notes from which to study. When options for accessing information were not provided, students tried to devise alternatives. Alex tried audio recording, but even though he was given his teacher’s permission to do this, he described how ‘the aides would be obstructionist and say ‘you are not supposed to record’ because other students don’t do that.’

When asked, teachers felt that ‘the student with vision impairment does not use equipment efficiently to take notes from the board and consequently does not have all the notes other students have in their notebooks.’ All teachers commented that they ‘did not have adequate training in the assistive technology and specialist equipment used by the student with vision impairment.’ As stated by an aide, ‘we are seeing a lot of technological equipment that we haven’t seen before in the class so we have to cope with that.’ Accessing texts was also an issue, and elicited a comment from a parent:

The inability to get standard text books in core mandatory subjects in audio format is criminal. There is no reason – I mean with signing of the Marrakesh treaty now on intellectual property.

Evidence for the lack of implement of adjustments was not just limited to print materials for these students, but included broader school wide practices. Teachers and aides were reluctant to allow working that was ‘different’, as demonstrated by Alex doing times tables grids.

They do a grid you have to fill out. Grids are notoriously hard for me ... So, the issue was that although I could easily do those times tables if someone asked me 'Ok, what is 7x3.' But I couldn't really fill out those grids in time, which caused a lot of harassment about not being 'able', despite the fact that I could show them that I knew them if they just asked me them.

Alex explained 'they didn't give any alternative means of assessment. No, none. ... being different is part of being human, trying to homogenise the whole classroom does not work, so if they did it orally...' His frustration at being seen as less intelligent than he is was evident throughout his transcript. As noted by a parent, 'there seems to be no measure of outcome quality. It might just be that you sit in the classroom taking up space, and they just tick the box that you are there.' Alex also related the story of when he chose to make a larger than normal structure in woodwork, his aide said 'what are you doing! You can't build a guinea pig house! It is not on the list!' There was no allowance given for his individual needs.

All students experienced restricted access/exclusion from subjects, particularly in science, mathematics and sport areas. Science teachers, reluctant to have students with vision impairment in their classes, often required an aide to be present in every class in case they ran practicums, but timetable issues frequently made this impossible. As Nick stated, 'I can't do science now. I've got my Bunsen burner license, I don't know how they trusted me with that... but I can't this year because apparently, it is now all too dangerous.' Nick was not involved in the consultation process, and was quite annoyed that he couldn't be part of the class. Holly also reflected on having an aide in every science lesson, 'I don't know why. It's not me wanting it.' There was no mention of work being adapted. As Alex revealed, 'I was not given models when we were discussing atoms. No, none of that.'

Students were often excluded from sport, with a lack of adjustments made to allow for participation by all students. An exception was Emma's sport teacher who 'would use a bright orange puck instead of a white one for hockey because it made it much brighter which is helpful' and would 'mark black spots on a white ball to make it easier to see.' Most students were encouraged to participate in activities elsewhere. For Holly, her teacher 'used to let me go into the storeroom and go on the exercise bikes' as was also the situation for James. Both Edward and Nick participated in rowing, but only in the summer. At other times, they did not take part in sport at all. Steve always went to the library. For Alex, his experience of sport was of having to fit in with the class, an extremely embarrassing situation. 'I was expected to be the same' and participate 'just like the others.'

They were teaching us to play table tennis. Does it look like I can play table tennis?  
Well, no, but one of my aides was running around chasing me! [emphasis]. And trying to stick a racket under my armpit saying, ‘You have to be like everyone else – go try it’.  
That was not one of the best experiences.

This emphasis on equity as mistakenly understood as *the same* practices for all, resulted in many of these students feeling separate and excluded from classrooms, peers and schooling.

### **Teacher and aide support and training**

Aides were often perceived to be a barrier to full participation. Students referred to the support from aides as quite variable, and often inadequate stating: ‘teacher aides are just there and they don’t do anything;’ ‘they help but are cold;’ ‘they just go into class and just sit there;’ ‘they were on top of me the whole time;’ ‘they can be really intrusive’ and ‘I braille, but she couldn’t.’ In some rare instances, students felt aides were supportive to their learning. Holly for example, would sometimes take a picture of the work written on the board. ‘If I do take a picture from the board I can send it to my aide and she types it up for me.’ However, student access to meaningful learning often depended on aides having both subject knowledge and technical expertise, which were not always evident. Aides may be keen to help, but as Alex experienced, ‘The aide’s suggestion was to use a large mouse curser ... with my magnification, the mouse curser takes up about 90% of my screen. But there is no telling that to people who have a brilliant idea.’

Teachers and aides had little experience or understanding of vision impairment. An aide acknowledged her lack of training.

No, I haven’t had any experience, none before Nick came. In the integration course, we did a bit on disabilities, and we put on glasses and tried to find our way down the corridor one night but that was all.

As a HoES stated, ‘Teachers did not do any training prior to taking Edward. As far as I know there are no units/modules or online activities that staff could do. Nothing was made available for staff, no.’ Neither HoES were knowledgeable about the expanded core curriculum (ECC), regarded as vital for addressing specific needs of students with vision impairment. ‘Expanded Core Curriculum? I don’t know of that’ one stated while another reflected, ‘I think I have something about that in my file... He is supposed to participate in his own IEP it says here – well there you go! I didn’t realize that.’

A parent commenting on the lack of understanding of vision impairment by staff stated, 'Most of them [teachers/aides] don't understand vision impairment. And every year we have had to go through the process of educating teachers.' This parent had hoped to find a school that was experienced in teaching students with vision impairment, stating

I rang Vision Australia and asked them if they could tell us a private school in Melbourne that had a vision impaired child and they couldn't. I couldn't believe she couldn't or maybe wouldn't tell me. A privacy issue? But this is just crazy. Because if you knew there was a school that had a model that worked, or experience in the area you could say ok, you are used to this I'm not going to have to teach you anything about vision impairment.'

She added, 'For him to go to a school where they had no experience of a VI student has been really difficult.'

Contrary to many statements made regarding teachers and aides, Holly was very happy with her young teacher of theatre studies, who thought about how to include her in all activities, explaining 'she is really keen to make sure ...that I get the best learning opportunity... One professional development she did was on how to give additional help or aiding, and she said all teachers should do it because you don't know when you are going to get someone with special needs.'

Other participants recalled less positive memories. Emma recalled an embarrassing moment.

I had this teacher and she was explaining something to us and of course I am looking at her but she started having a go at me for not paying attention. But of course, my eyes were wandering. And she was like full on telling me off! But the rest of the class all came to my defence and were like no, she is looking at you – that's just how her eyes are.

Did Emma's teacher lack empathy or lack information about her vision impairment? Poor communication was seen to exist between teachers, aides, students and parents. Few schools had regular parent support group meetings of parents, teachers and aides. Teachers were consequently not well informed regarding students' needs, and aides had little clarity of their role, as illustrated when Alex expected scribing support from his aide, but found 'None of them wanted to scribe stuff for me or do anything of that sort.'

## Discussion

This article reports on the perceptions of students with vision impairment on their secondary schooling support, giving voice to students themselves. Statements from significant others added further viewpoints to the subject of support. Students revealed a depth of feeling regarding their experiences, and while there were some positive experiences the overwhelming feeling was of inadequate and inconsistent support, with one participant believing his negative experiences with aides and teachers were instrumental to his subsequent withdrawal from his school. Although learning is approximately 80 percent visual (Statewide Vision Resource Centre, 2015) and teaching methodologies and resources rely on visual based approaches, teachers appear unaware of the need for change to enable students with vision impairment equitable access to the curriculum. As in other studies, time was regarded as major issue for students (Bardin & Lewis, 2008; Curtis & Reed, 2011). Students were frustrated when aides and teachers were unable or unwilling to produce material presented to the class in a format accessible to them.

Students felt aides were present in the classroom too often and often intrusive, and they were often unhappy with the personal interaction. This may have been exacerbated by a lack of clarity in the aides' role from the perspective of the teacher, the aide and the student. Aides were variously described as overbearing, unhelpful, cold, lacking experience in vision impairment, distracting, obstructive, trying but unable to be helpful, and causing dependence. Research supports the notion that aides' constant nearness may lead to learned helplessness, creating increased dependence on adults, decreasing interactions with peers and have a negative impact on self-esteem (Higgins & Ballard, 2000; Humphrey & Lewis, 2008; Khadka, Ryan, Margrain, Woodhouse & Davies, 2012, Nelson, Rubin & Fox, 2005). Aides were viewed as pushing forward suggestions which were neither appropriate nor desired by the students. Some aides were viewed as having the notion that their role was 'to make normal' students with vision impairment, encouraging them to complete tasks or participate in the same manner as their peers. However, the Salamanca Statement accepts that 'human differences are normal and that learning must accordingly be adapted to the needs of the child rather than the child fitted to preordained assumptions regarding the pace and nature of the learning process' (UNESCO, 1994, p. 7). Educational equity recognizes that equal treatment is not the same as equal opportunity to learn, and that a student who is vision impaired yet receives the same textbook as the rest of the class may be 'receiving the same treatment, but not the same opportunity to learn' (de Valenzuela, 2014, p. 285).

Students expressed concern that aides were not academic enough or expert enough in knowing how best to help someone with vision impairment. Research indicates interactions with aides are generally of a lower quality, with aides 'more likely to offer inaccurate or confusing explanations as compared to teachers, who explained concepts and promoted student thinking and task engagement' (Gibson, Paatsch & Toe, 2016, p. 14). This research supports the concern that aides may create a barrier to communication between the teacher and the student, and with their classmates (Blatchford, Russell, Bassett, Brown & Martin, 2007; Forlin, Keen & Barrett., 2008; French, 2003; Mansaray, 2006; Takala, 2007).

The students without aides in the classroom appeared to be academically more successful than those who did, based on disclosed school results. It is unclear in this study whether aides were in the classroom because teachers felt the students could not manage without them, or the students were not managing as well because the aides were there. A large UK project, Deployment and Impact of Support Staff (DISS) has questioned the educational value of aides in the classroom (Blatchford, Russell & Webster, 2012). Their results 'exposed' the assumption that more aide support for pupils who struggle will help them to progress academically 'as something of a fallacy' (Webster, 2014, p. 2), finding pupils receiving the most aide support made less progress than similar pupils who received little or no aide support, even after controlling for factors such as prior attainment and special need status.

There has been a rapid increase in available technologies with which to support students in the classroom (Bryant, Bryant, Shih & Seok, 2010; Dalton & Roush, 2010). Aides and teachers were found to have only a basic knowledge of the assistive technology the students used, so were unable to assist when there were problems. In addition, aides would often try to introduce a new technology without the expertise to successfully implement it, which students found frustrating. Research confirms that assistive technology may be underutilized because of inadequate knowledge by teachers and aides to provide effective instruction (Zhou, Smith, Parker & Griffin-Shirley 2011).

Stereotypical views by teachers and aides meant students were often excluded from science, or an aide expected in every science class which was regarded as counterproductive by students who felt they could manage any safety issues (Rule, Stefanich, Boody & Peiffer 2011). Research highlights that students with vision impairment would benefit from participation in physical activities (Houwen, Hartman & Visscher, 2010; Lieberman, Haegele, Columna & Conroy, 2014; Wagner, Haibach & Lieberman, 2013). Students in this study, however, were often excluded from sport or PE programs. When students were

expected to participate, the outcomes were often disastrous, supporting research showing that lack of teacher training is a major issue, resulting in curricula, activities, and pace of lessons not conducive to active participation and exacerbated by overprotective and discouraging attitudes and fears about student safety (Lieberman, Houston-Wilson & Kozub, 2002).

The requirement for teachers to have training in vision impairment if they have or are going to have a student in their class has been touted by many in recommendations made to the Commonwealth of Australia (2015, 2016a). The importance of teacher attitudes for inclusive education has also been widely recognized for some time (Avramidis & Norwich, 2002; Forlin, Loreman, Sharma & Earle, 2009). Teachers with positive attitudes more readily change and adapt the ways they work to accommodate learning needs (Sharma, Forlin, Loreman & Earle, 2006) with instructional variations recognized as a key to academic success (Roy, Guay & Valois, 2012).

A recommendation from this study is that as teachers in Australia are required to complete online units on inclusion as part of their teacher registration, a unit on vision impairment should also be made available, with those about to teach a student with vision impairment obliged to undertake this unit. It is quite evident that not all students with vision impairment are the same or require similar modifications or adjustments. However, the importance of the ECC for students with vision impairment has been well documented (Hatlen & Sapp, 2010) and teachers and aides need to be aware of what this involves. The ECC consists of instructional areas that specifically address skills and concepts unique to visual impairment including access skills, social skills, orientation and mobility skills, assistive technology and instructive technology skills (Blankenship, Hatlen & Lohmeier, 2009; Hatlen & Sapp, 2010). The online unit could outline the importance of giving students the opportunity to participate in all subjects, not sitting on the sidelines, or 'fitting in,' and making activities suitable so all students participate together to achieve the learning outcomes. Expert guidance on how to make this happen, particularly in subjects such as sport, science and mathematics, is required. The restrictions experienced by students in the science laboratory is exclusionary, and must be addressed. Visiting Teacher (VT) specialists for students with braille requirements, and experts to give advice on assistive technology will also be required.

Like other international studies (e.g. Blatchford, Webster & Russell, 2012; Warhurst, Nickson, Commander & Gilbert, 2014; Wilson, Schlapp & Davidson, 2003), this study found the nature of aides' work within schools to be diverse. Aides work in different subjects across different year levels, necessitating not only an understanding of the various courses but of the

assistive technology and learning specifics of the student with vision impairment. Such expectations support the questioning of the benefit students receive from working with often unqualified aides (Butt & Lowe, 2011; Farrell et al. 2010). Even when Australian aides have obtained Vocational Education and Training (VET) qualifications, the expectation of a school must be appropriate. According to the Australian Qualifications Framework (2013), VET Certificate II or III graduates should have 'limited responsibility' (p. 32). School leaders must clarify the role of an aide given the current high level of role ambiguity (Butt & Lowe, 2011; Webster, Blatchford, and Russell 2013). Unless the school employs qualified teachers as aides, responsibilities must be limited to non-instructional roles such as administrative duties, materials preparation with any student instruction based on plans developed and directed by the teacher. Teachers may require training in how to best work collaboratively, monitoring and supporting their aides. Students in this study, like those in the study by Blatchford, Webster, and Russell (2013) reported that aides were often simply sitting in the classroom listening to the teacher for the greater part of lessons. Better use must be made of aides as a resource.

## **Conclusion**

Student interviews rich in data provided a detailed view of the influence of aide and teacher support on their educational experiences, with additional material provided by teachers, aides, HoES and parents. The many negative experiences students highlighted attest to the need for further research into the training and value of aides in the classroom. Secondary schools with a student with vision impairment in attendance need to build capacity through professional development of classroom teachers, as many were underprepared to teach these students and would benefit from training in vision impairment, including differentiating instruction, knowledge of the ECC and working in collaboration with aides, parents, the student and other professionals such as Guide Dogs and VTs. School principals are responsible for ensuring school-wide collaboration, planning time, support and the best use of resources to enable quality inclusive practices in the classroom. They must dispel the notion that students with vision impairment should fit into the current program, and instead promote changes that will ensure *all* students can participate in activities on an equal basis. This study suggests that the requirement for the provision of an equitable and quality education with equality of opportunity is not being met with the current deployment and reliance on often unqualified aides.

While recognizing there are limitations to this study, being a small study of the experiences of only a few senior secondary students with vision impairment attending a limited number of Victorian schools, the study shows there remains a need for further research into the support for students with vision impairment attending mainstream schools.

## References

- AUSTRALIAN QUALIFICATIONS FRAMEWORK (2013) *AQF Second Edition 2013* [Online at <http://www.aqf.edu.au/> ]. Accessed 01/01/17
- AUSTRALIAN CURRICULUM (2015) Student Diversity. [Online at [www.Australiancurriculum.edu.au/studentdiversity/students-with-disability](http://www.Australiancurriculum.edu.au/studentdiversity/students-with-disability)] Accessed 01/01/17
- AUSTRALIAN CURRICULUM and ASSESSMENT REPORTING AUTHORITY (ACARA) (2013) *The shape of the Australian curriculum*. [Online at [http://www.acara.edu.au/verve/\\_resources/the\\_shape\\_of\\_the\\_Australian\\_curriculum\\_v4.pdf](http://www.acara.edu.au/verve/_resources/the_shape_of_the_Australian_curriculum_v4.pdf) ] Accessed 27/11/16
- AVRAMIDIS, E. and NORWICH, B. (2002) Teachers' attitudes towards integration / inclusion: A review of the literature. *European Journal of Special Needs Education*, 17, 2, 129-147. doi: 10.1080/08856250210129056
- BARDIN, J. A. and LEWIS, S. (2008) A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment and Blindness*, 102, 472-483.
- BLANKENSHIP, K., HATLEN, P. and LOHMEIER, K. (2009) Expanded core curriculum: 12 years later. *Journal of Visual Impairment and Blindness*, 103, 103-112
- BLATCHFORD, P., RUSSELL, A., BASSETT, P., BROWN, P. and MARTIN, C. (2007) The role and effects of teaching assistants in English primary schools (Years 4 to 6) 2000–2003. Results from the Class Size and Pupil–Adult Ratios (CSPAR) KS2 Project. *British Educational Research Journal*, 33, 5-26.
- BLATCHFORD, P., RUSSELL, A. and WEBSTER, R. (2012) *Reassessing the Impact of Teaching Assistants: How Research Challenges Practice and Policy*. New York City: Routledge.

- BLATCHFORD, P., WEBSTER, R. and RUSSELL, A. (2012) *Challenging the Role and Deployment of Teaching Assistants in Mainstream Schools: The Impact on Schools. Final Report on the Effective Deployment of Teaching Assistants (EDTA) Project*. London: Institute of Education. Online at [http://maximisingtas.co.uk/assets/content/edtareport-2.pdf] Accessed 13/5/2017
- BRYANT, B. R., BRYANT, D. P., SHIH, M. and SEOK, S. (2010) Assistive technology and supports provision: A selective review of the literature and proposed areas of application. *Exceptionality*, 18, 4, 203-213.
- BUTT, R. and LOWE, K. (2011) Teaching Assistants and Class Teachers: Differing Perceptions, Role Confusion and the Benefits of Skills-based Training. *International Journal of Inclusive Education*, 16, 2, 207-219.
- COMMONWEALTH OF AUSTRALIA. (2014) *Disabilities Discrimination Act 1992*. [Online at <https://www.legislation.gov.au/Details/C2014C00013>] Accessed 01/01/17
- COMMONWEALTH OF AUSTRALIA. (2016) *Disabilities Standards for Education 2005*. [Online at <http://education.gov.au/disability-standards-education>] Accessed 01/01/17
- COMMONWEALTH OF AUSTRALIA (2015) *Final Report for the 2015 Review of the Disability Standards for Education 2005* [Online at <https://docs.education.gov.au/documents/final-report-2015-review-disability-standards-education-2005>] Accessed 01/01/17
- COMMONWEALTH OF AUSTRALIA. (2009) *Shut Out: The Experience of People with Disabilities and Their Families*. [Online at <https://www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/shut-out-the-experience-of-people-with-disabilities-and-their-families-in-australia> ] Accessed 01/01/17
- COMMONWEALTH OF AUSTRALIA. (2016a) The Senate Report: Access to real learning: the impact of policy, funding and culture on students with disability. [Online at [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Education\\_and\\_Employment/students\\_with\\_disability/Report](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/students_with_disability/Report)] Accessed 01/01/17
- CHILDREN WITH DISABILITY AUSTRALIA. (2015) 2015 Review of the Standards for Education 2005 submission. [Online at <https://docs.education.gov.au/node/40401>] Accessed 27/11/16

- COX, P. R. and DYKES, M. K. (2001) Effective classroom adaptations for students with visual impairments. *Teaching Exceptional Children*, 33, 68-74.
- CURTIS, K. and REED, M. (2011) High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment and Blindness*, 105, 548-557.
- DALTON, E. M. and ROUSH, S. E. (2010) Assistive and educational technology standards and teacher competencies in relation to evidence-based practice: Identification and classification of the literature. *Journal of Special Education Technology*, 25, 2, 13-30.
- de VALENZUELA, J. S. (2014) Sociocultural Views of Learning. In L. Florian (ed.) *The Sage Handbook of Special Education*, pp. 299-314 London, UK: Sage Publications.
- DEPARTMENT OF EDUCATION and TRAINING, VICTORIA (DET) (2016) *Program for students with disabilities – operational guidelines for schools 2017*. [Online at <http://www.education.vic.gov.au/about/programs/needs/Pages/disabilityprogram.aspx>] Accessed 01/01/17
- FARRELL, P., ALBORZ, A., HOWES, A. and PEARSON, D. (2010) The Impact of Teaching Assistants on Improving Pupils' Academic Achievement in Mainstream Schools: A Review of the Literature. *Educational Review*, 62, 4, 435–448.
- FORLIN, C., CHAMBERS, D., LOREMAN, T., DEPPELER, J. and SHARMA, U. (2013) *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Braddon, ACT: Australian Research Alliance for Children and Youth. [Online at <https://www.aracy.org.au/publications-resources/area?command=record&id=186> ] Accessed 01/01/17
- FORLIN, C., KEEN, M. and BARRETT, E. (2008) The concerns of mainstream teachers: Coping with inclusivity in an Australian Context. *International Journal of Disability, Development and Education*, 55, 251- 264.
- FORLIN, C., LOREMAN, T., SHARMA, U. and EARLE, C. (2009) Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, 13, 2, 195-209.

- FRENCH, N. K. (2003) Paraeducators in special education programs. *Focus on Exceptional Children*, 36, 2, 1-16.
- GIANGRECO, M. F., BROER, S. M. and SUTER, J. C. (2011) Guidelines for selecting alternatives to overreliance on paraprofessionals: Field-testing in inclusion-oriented schools. *Remedial and Special Education*, 32, 22–38.
- GIBSON, D., PAATSCH, L. and TOE, D. (2016) An analysis of the role of teachers' aides in a state secondary school: perceptions of teaching staff and teachers' aides, *Australasian Journal of Special Education*, 40, 1, 1-20.
- GUIDE DOGS VICTORIA (2016) Policy and Advocacy priorities. Retrieved from [Online at <https://www.guidedogsvictoria.com.au/> ] Accessed 01/01/17
- HARRIS, L. R. and APRILE, K. T. (2015) I can sort of slot into many different roles': examining teacher aide roles and their implications for practice. *School Leadership and Management*, 35, 2, 140-162.
- HATLEN, P. and SAPP, W. (2010) The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment and Blindness*, 104, 338-346.
- HIGGINS, N. and BALLARD, K. (2000) Like everybody else? What seven New Zealand adults learned about blindness from the education system. *International Journal of Inclusive Education*, 4, 2, 163-178.
- HOUWEN, S., HARTMAN, E. and VISSCHER, C. (2010) The relationship among motor performance, physical fitness, and body composition in children with and without visual impairment. *Research Quarterly for Exercise and Sport*, 81, 290-299.
- HUMPHREY, N. and LEWIS, S. (2008) Make me normal. *Autism*, 12, 1, 23–46.
- KHADKA, J., RYAN, B., MARGRAIN, T. H., WOODHOUSE, M. J. and DAVIES, N. (2012) Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30, 3, 182-196.
- KVALE, S. (1996) *Interviews : An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.
- KVALE, S. (2009) *Interviews : Learning the craft of qualitative research interviewing*. Los Angeles, CA : Sage Publications.

- LIEBERMAN, L. A., HAEGELE, J. A., COLUMNA, L. and CONROY, P. (2014) How students with visual impairments can learn components of the expanded core curriculum through physical education. *Journal of Visual Impairment and Blindness*, 108, 3, 239 – 251.
- LIEBERMAN, L., HOUSTON-WILSON, C. and KOZUB, F. (2002) Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly*, 19, 3, 364-377.
- MANSARAY, A. A. (2006) Liminality and in/exclusion: Exploring the work of teaching assistants. *Pedagogy, Culture and Society*, 14, 171–187.
- MERRIAM, S. B. (1998) *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- NELSON, L. J., RUBIN, K. H. and FOX, N. A. (2005) Social withdrawal, observed peer acceptance, and the development of self-perceptions in children ages 4 to 7 years. *Early Childhood Research Quarterly*, 20, 2, 185-200.
- ROY, A., GUAY, F. and VALOIS, P. (2012) Teaching to address diverse learning needs: Development and validation of a differentiated instruction scale. *International Journal of Inclusive Education*, 17, 11, 1186-1204.
- RULE, A. C., STEFANICH, G. P., BOODY, R. M. and PEIFFER, B. (2011) Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, 33, 6, 865-887
- SHADDOCK, A. J., NIELSEN, T. W., GIORCELLI, L., KILHAM, C. H. and HOFFMAN-RAAP, L. (2007) What Are the Critical Factors in Ensuring Successful Collaboration Between Mainstream Teachers and Teaching Assistants? In A. J. Shaddock, B. Smyth King, and L. Giorcelli (eds.), *A Project to Improve the Learning Outcomes of Students with Disabilities in the Early, Middle and Post Compulsory Years of Schooling*, pp. 209– 259 Canberra: Australian Government Department of Education, Science and Training.
- SHARMA, U., FORLIN, C., LOREMAN, T. and EARLE, C. (2006) Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international

comparison of novice pre-service teachers. *International Journal of Special Education*, 21, 2, 80-93.

STAKE, R. E. (1995) *The art of case study research*. Thousand Oaks, CA: SAGE Publications.

STATEWIDE VISION RESOURCE CENTRE. (2015) *Support for school-aged children with vision impairments in Victoria*. [Online at [http://svrc.vic.edu.au/Support\\_Vic\\_VI.pdf](http://svrc.vic.edu.au/Support_Vic_VI.pdf)] Accessed 01/01/17

TAKALA, M. (2007) The work of classroom assistants in special and mainstream education in Finland. *British Journal of Special Education*, 34, 50–57.

TEWS, L. and LUPART, J. (2008) Students with disabilities' perspectives of the role and impact of paraprofessionals in inclusive education settings. *Journal of Policy and Practice in Intellectual Disabilities*, 5, 39-46.

UNESCO. (1994) *The world conference on special needs education: Access and quality. Final report*. Salamanca, Spain: Ministry of Education and Science, Madrid. [Online at [www.unesco.org/education/pdf/SALAMA\\_E.PDF](http://www.unesco.org/education/pdf/SALAMA_E.PDF)] Accessed 13/5/2107

VICTORIA STATE GOVERNMENT, EDUCATION and TRAINING (2016) *Victorian Skills Gateway* [Online at <http://www.skills.vic.gov.au/victorianskillsgateway/Students/Pages/OccupationSearchDescription.aspx?type=occupationandkeyword=andsearchid=911>] Accessed 01/01/17

VISION AUSTRALIA. (2012) Supporting children who are blind or have low vision. [Online at [www.vision Australia.org/living-with-low-vision/children's-services](http://www.vision Australia.org/living-with-low-vision/children's-services)] Accessed 01/01/17

VISION AUSTRALIA. (2015) *Submission to the 2015 Review of the Disability Standards for Education*. [Online at <https://docs.education.gov.au/node/40531>] Accessed 01/01/17

WAGNER, M., HAIBACH, P. S. and LIEBERMAN, L. J. (2013) Gross motor skill performance in children with and without visual impairments: Research to practice. *Research in Developmental Disabilities*, 34, 10, 3246-3252.

- WARHURST, C., NICKSON, D., COMMANDER, J. and GILBERT, K. (2014) Role stretch: Assessing the blurring of teaching and non-teaching in the classroom assistant role in Scotland. *British Educational Research Journal*, 40, 1, 170–186.
- WEBSTER, R. (2014) 2014 Code of Practice: How research evidence on the role and impact of teaching assistants can inform professional practice. *Educational Psychology in Practice: theory, research and practice in educational psychology*, 30, 3, 232-237
- WEBSTER, R. and BLATCHFORD, P. (2015) Worlds apart? The nature and quality of the educational experiences of pupils with a Statement for special educational needs in mainstream primary schools, *British Educational Research Journal*, 41, 2, 324-342
- WEBSTER, R., BLATCHFORD, P. and RUSSELL, A. (2013) Challenging and changing how schools use teaching assistants: Findings from the Effective Deployment of Teaching Assistants project. *School Leadership and Management*, 33,1, 78-96.
- WEBSTER, R., BLATCHFORD, P., BASSETT, P., BROWN, P., MARTIN, C. and RUSSELL, A. (2010) Double standards and first principles: Framing teaching assistant support for pupils with special educational needs. *European Journal of Special Needs Education*, 25, 4, 319-336.
- WHITBURN, B. (2013) The dissection of paraprofessional support in inclusive education: 'You're in mainstream with a chaperone'. *Australasian Journal of Special Education*, 37, 02, 147-161.
- WILSON, V., SCHLAPP, U. and DAVIDSON J. (2003) An extra pair of hands? Managing classroom assistants in Scottish primary schools. *Educational Management Administration and Leadership*, 31, 2, 189–205.
- WORLD HEALTH ORGANIZATION and WORLD BANK (2011) *World report on disability*. [Online at [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf) ] Accessed 01/01/17
- YAZAN, B. (2015) Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), 134-142
- ZHOU, L., SMITH, D. W., PARKER, A. T., and GRIFFIN-SHIRLEY, N. (2011) Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105, 533-547.

## Chapter 10

### **Technology today: Inclusive or exclusionary for students with vision impairment?**

This article expands on the overarching theme of technology, an area of prime concern for all seven participants with vision impairment. Teachers' knowledge and understanding of the assistive technologies was found to be insufficient for the students' needs. Teachers were not prepared to use the assistive technology, and were unable to teach students how to use it, or keep abreast of the current technology.

Participants in this study tended to shy away from any equipment that singled them out preferring to use technology available to all students. The cost of purchase and maintenance and repair may have contributed to the limited use, but the lack of teacher expertise with the equipment was a major issue. Consumer electronic devices such as smartphones, tablet computers, and e-book readers containing accessibility features such as large print and speech have become far more widely used in recent years by students with vision impairment – but their use was limited by technological support and teacher interest.

Support for teachers to address this critical area of instruction is necessary to close the achievement gap between students with and without disabilities. Technologies may assist students with vision impairment in their endeavour to access the curriculum equitably with peers, but ignorance of what is available and insufficient technical expertise and training in the technology will negatively affect advancement. It is important that students with vision impairment are not further disadvantaged through ineffective, untrained use of assistive technologies.



## **Technology today: Inclusive or exclusionary for students with vision impairment?**

### **Abstract**

The inclusion and equity of mainstream education for Australian students with vision impairment was considered in this phenomenological study of seven students' experiences. Using Interpretative Phenomenology Analysis, the theme of technology was viewed as significant. Participants revealed a combination of ineffective technology for accessing board-work and worksheets, lack of training in the use of the technology, incompatibility issues, time factors and the lack of teacher expertise limited their use of technology. The provision of appropriate assistive technology for students with vision impairment in this digital age is paramount if equality is to be achieved. Students require training, by experts in technology and vision impairment, in the most current assistive technologies to access instructive technology increasingly used in classrooms and in the wider community. Teachers need an understanding of how imperative assistive technology is for students with vision impairment, and must become skilled practitioners in its use.

### **Key Words**

Vision impairment, technology, assistive technology, inclusive education, phenomenology, interpretative phenomenological analysis.

# **Technology today: Inclusive or exclusionary for students with vision impairment?**

## **Introduction**

*Access to and use of assistive technology is not a luxury but a necessity for students with vision impairment. It is the key that unlocks the world of print and digital information.* (Segers, 2014, p. 106)

Globally, the World Health Organisation (WHO) and the World Bank (2011) state that “disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others” (p. 4). It is maintained the school environment has a huge impact on the experience and extent of disability:

Inaccessible environments create disability by creating barriers to participation and inclusion. Examples of the possible negative impact of the environment include ... a blind person using a computer without screen-reading software. (The WHO and World Bank, 2011, p. 4)

Students with vision impairments have the same rights as their sighted peers to an equitable, accessible, and comprehensive education. These rights are enshrined in the Australian Disability Discrimination Act (Commonwealth of Australia, 1992) and in the subsequent Disability Standards for Education 2005 (Commonwealth of Australia, 2006). The majority of the estimated 4000 school-aged children with vision impairment in Australia (Media Access Australia, 2013) attend inclusive mainstream schools (Foreman, 2011). Their right to education without discrimination is clear; diversity in an inclusive environment should be respected, and when barriers to accessing quality education or leading to exclusion are identified they must be removed (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013). Despite this, disability associations in Australia question educational access and delivery of education. Vision Australia, a leading national provider of vision services, in their submission to the 2015 Review of the Disability Standards for Education (Commonwealth of Australia, 2016), expressed deep concern regarding the education students with vision impairment are currently experiencing and stated:

The failure of the Standards to increase access and participation in education on the same basis as other students is clearly highlighted by the difficulties commonly experienced by students who are blind or have low vision ... Access to adaptive technology is vital ... this equipment provides access to activities, processes and materials that would otherwise be inaccessible to students who are blind or have low vision (p. 4-5).

The Australian Disability Standards for Education 2005 (Commonwealth of Australia, 2006) clarifies the legal obligations associated with inclusive education, articulating the expectation that all Australian education providers know and implement the Standards and make the necessary adjustments to make participation in education equitable (Deppeler, Forlin, Chambers, Loreman & Sharma, 2015). The Standards stipulate that education providers must meet their obligation to make adjustments, where “an adjustment is a measure or action taken to assist a student with a disability to participate in education and training on the same basis as a student without a disability” (Commonwealth of Australia, 2006. p. 19). Students with vision impairment can expect adjustments to facilitate their inclusion into mainstream classrooms (Australian Curriculum, 2015; Cox & Dykes, 2001) which may include adapting curriculum delivery, providing professional learning and training for staff and access to assistive technology (Department of Education and Training, Victoria, 2015; Statewide Vision Resource Centre, 2015), recognizing the difficulty students with vision impairment may have accessing the curriculum over 80 per cent of everything we learn is purported to be acquired through vision (South Australia Department for Education and Child Development, 2016).

In today’s technology-rich world students with and without disabilities have ready access to information in an electronic format with the click of a mouse or keystroke command. The digital revolution is said to be transforming almost every aspect of human existence (Devlin, 2013), with terms such as ‘digital natives’ and ‘connected generation’ used to describe contemporary learners (Palfrey & Gasser, 2013). Instructional technology includes computers, electronic whiteboards, projectors and appropriate software which may be used by all students in the class to enhance learning experiences, while assistive technology includes sophisticated electronic devices enhancing instructional technology access for students with vision impairment. The World Wide Web has enabled increased access to print materials for students who are blind or vision impaired using assistive technology programs that read the internet, translate text into braille, emboss braille materials

from the computer, scan and convert files into braille or read files aloud (Segers, 2014). In order to benefit from the assistive technology, students with vision impairment require training in its use (Ajuwon, Meeks, Griffin-Shirley & Okungu, 2016). A lack of teacher education in assistive technology and knowledge of how to utilise it in teaching and learning in part contributes to the continuing inaccessibility of print materials and media to students with vision impairment (Chambers, 2011; Constantinescu, 2015; Flanagan, Bouck & Richardson, 2013). The Canadian Library Association (2000, p. 2) pointed out that although technology “can potentially open up the world of information to people with print disabilities, they are being locked out through inaccessible web design and cheap digitization.”

### **Assistive Technology**

The Convention on the Rights of Persons with Disability (United Nations, 2006) endorses the right of individuals with disability to have access to information and communication technologies and systems enabling education on an equal basis with others. Assistive technology is defined under the US Individuals with Disabilities Education Act 2004, Section 602, as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain or improve functional capabilities of a child with disabilities” (p. 8). Student productivity, academic success, creativity and engagement in classrooms may be improved using technologies, which allow for differentiated, explicit and individualised instruction (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013; Simpson, McBride, Spencer, Lowdermilk & Lynch, 2009). Assistive technology allows students with disability to access instructional technology, as well as enhancing access to physical environments, mobility, communication, and functional skills that may be difficult without the technology.

Although most schools provide accommodations for students including special equipment and assistive technology, accessing these may be difficult (Flanagan, Bouck & Richardson, 2013). Teachers may be overwhelmed by the rapid increase in technologies *per se* and this includes the ever-increasing range of tools to support students with disabilities (Bryant, Bryant, Shih & Seok, 2010; Dalton & Roush, 2010; Zhou, Smith, Parker & Griffin-Shirley, 2011). “Limited training, combined with inadequate specialist input, personnel, planning time, and resources to support staff” challenge teachers’ ability to implement inclusion for students with vision impairment (Brown, Parker & Passmore, 2013, p. 230). The poor provision of specialized vision aids and equipment to students has been attributed in part to the anxiety experienced by teachers in using the equipment (Smith, Geruschat & Huebner,

2004). The lack of teacher proficiency with assistive technologies negatively impacts students who are vision impaired “by stunting the development of assistive technology skill, ultimately resulting in poorer post-secondary education and employment outcomes” (Siu & Morash, 2014, p. 384). Supporting teachers to address this area of instruction is critical (Kelly, 2011; D’Andrea & Siu, 2015), as teacher proficiency can be improved through professional development (Kapperman, Sticken & Heinze, 2002; Zhou, Ajuwon, Smith, Griffin-Shirley, Parker & Okungu 2012). As classes change for teachers from year to year, and with technological advances made, it is not possible for teachers to receive training in all the technologies relevant for all future students (Siu & Morash, 2014), making ongoing professional development imperative.

An added difficulty is identifying the most appropriate technology to use. A recent review by Thomas, Barker, Rubin & Dahlmann-Noor (2015) noted “there is no evidence from controlled clinical trials to guide choice of assistive technologies in clinical and educational practice” (p. 12). At a time when post-school unemployment for students with vision impairment remains much higher than the average (Ravenscroft, 2013), and doubts are increasing regarding the validity of inclusive education meeting the needs of these students, the barriers for these students must be acknowledged and addressed. The belief is that through listening to students themselves, their perspectives will become part of the solutions (Clark & Moss, 2011; Messiou, 2012).

### **The Study**

The aim of the research was to listen to the voices of students with vision impairment about their experiences of education in mainstream secondary schools. The question driving this study is: Does technology enable students with vision impairment access to an inclusive education, with equity and quality of access and opportunity? Few studies have been undertaken that explicitly seek to know how students with vision impairment attending mainstream schools experience their schooling (Byrnes & Rickards, 2011; Whitburn, 2014). When giving voice does occur, the extent to which barriers to learning may exist for these students with vision impairment can be revealed (Jones, 2014). Issues highlighted by students themselves should be targeted to engender effective change (Adderley, Hope, Hughes, Jones, Messiou & Shaw, 2015). This article is based on studies of seven participants, all students with vision impairment attending secondary mainstream schools in Victoria, Australia.

## Methods

This qualitative research sought the insider perspectives of seven students with vision impairment about their experiences in inclusive mainstream educational settings.

Interpretative Phenomenological Analysis (IPA) is one of the most commonly used qualitative methodologies, with theoretical roots in phenomenology, hermeneutics, and idiography (Smith, 2011). IPA was chosen as it is committed to the detailed examination of the particular case, exploring how meaning is ascribed to participants' experiences of interactions with the environment (Smith, 2015; Smith, Jarman & Osborn, 1999; Wagstaff, Jeong, Nolan, Wilson, Tweedlie, Phillips, Senu & Holland, 2014). Small numbers of participants are common in IPA studies (Brocki & Wearden, 2006), with each purposefully and intensely analysed (Smith & Eatough, 2007; Smith, 2011). Data collection is commonly by in-depth, semi-structured interviews, which are audio-recorded and transcribed verbatim before being subjected to analysis. The analytic strategy develops "rich descriptions of how individuals think and feel about the challenges they face" (Smith, Brewer, Eatough, Stanley, Glendinning & Quarrell, 2006, p. 487). IPA acknowledges the researcher's centrality to the analysis, reflecting on and analysing the accounts that the interviews provide (Brocki & Wearden, 2006). Bracketing previous knowledge and assumptions, remaining genuinely open, curious, and at the same time critically self-aware and reflexive underpins this approach (Finlay, 2008, 2013).

Ethical approval was given for this study by Monash University Human Research Ethics committee. All participants were allocated pseudonyms for anonymity. Participants were recruited via a request in an online Guide Dog Victoria newsletter seeking students interested in opting into the study. Guide Dogs are a widely-accessed provider of both mobility instruction to students and safety guidelines for schools (Guide Dogs, 2016). All seven students who applied participated in the study and were mainstream secondary students. Of the three girls and four boys who opted into the study, one was seventeen years old and in Year 10 and the other six students were eighteen or nineteen years old, and in Year 12, the final year of schooling. One student was attending a state school, another completing his schooling at home via distance education after attending a state school until Year 9, while the others attended elite fee-paying private schools. In Australia, students with vision impairment are those who have permanent vision loss that cannot be corrected with glasses and affects their daily functioning. Students are designated legally blind with less than 6/60 visual acuity or less than 10 degrees visual field in their better eye (Department of

Education and Training, Victoria, 2015; Statewide Vision Resource Centre, 2015). In terms of classification for funding, Edward, Nick, Steve, Holly and Alex are legally blind, and James and Emma vision impaired. Holly is the only student who consistently uses braille.

Each student undertook two or three interviews within a three-month period. Interviews were all approximately one-hour duration, and held at a venue chosen by the participant. The semi-structured interviews were audio recorded and later transcribed. Additional thoughts and reflections were documented after each interview. Each participant's interviews were treated as one data set. The stages used throughout the analysis were as follows: Transcripts were read and reread with notes made about important content and language. Further readings, coding notes, and compiling categories resulted in the identification of emergent themes. Connections were then made between themes and a summary of pivotal themes created and placed in tentative categories. The researcher and two colleagues individually completed the analysis of each transcript, then met to discuss their findings and reach agreement on the superordinate themes for each participant. These themes were then considered across the cases. The aim of having multiple analysts was to ensure a more rigorous analysis, not provide an objective truth (Houghton, Casey, Shaw & Murphy, 2013; Tew, Bennett & Dixon, 2015; Yardley, 2000). This included trying to limit the impact of the interviewing researcher's own experiences and assumptions on the understanding of participants' experiences. These individual views and assumptions were examined and discussed with colleagues when the analysts came together, prior to the final development of the themes. Several overarching themes were identified from the analyses including social isolation, time, support personnel, implementation of the expanded core curriculum, and technology. Relevant literature, both current and seminal, was further explored after the analyses were completed, and technology chosen as the focus of this study.

## **Findings**

The theme considered in detail in this study, which emerged as particularly significant for the student participants when describing their school experiences, was that of instructional technology and use of assistive technologies.

### **Accessing work in class**

Participants were found to use a variety of technologies in trying to access work in the classroom. A strong message from all participants was that accessing information from the board was near impossible. There was no evidence of any technological intervention that

enabled notes to be successfully and usefully taken from the board by any participant. Emma had to rely on the students around her to whisper what was being written on the board as her teacher often failed to dictate as she wrote. Emma, relying on auditory rather than visual input, found this “very annoying,” and it created an unwanted dependence on others. When asked about using her computer in class, Emma replied “Oh no, we don’t use the computers in class ... I’ve never done that. I’ve never been in a class environment where people use laptops.” Emma did not want to appear any different to her peers, and was reluctant to “go against the rules.” She did not feel she could ask teachers for permission to use her computer in class as this might have been seen as “having an advantage”, so she suffered in silence, although it meant relying on others. This limited her independence, which she was uncomfortable with but could find no other solution. It can be perceived that this forced dependence on others affected her self-confidence and self-determination, resulting in her passive acceptance of her situation.

Holly uses a braille note, but as this does not provide direct access to what is written on the board, she also relies on verbal input, explaining:

I can’t get stuff off the board. I need it to be read out. My teacher discusses it in class anyway ... she does a lot of talking so that is helpful for me when I take notes but if I need something read to me off the board, I have to ask one of the students in the class

Holly did not like relying on others. She wanted to be viewed as an independent, able student but her teachers seemed unaware of her needs, as this reliance on others appeared to be an often-occurring situation.

Accessing work from the board was also problematic for Nick, who stated, “I didn’t have any useful technology to get notes from the board. All I had technology-wise was a computer.” Nick would not ask his peers for help as he felt this “a sign of weakness.” He admitted when tried to type the notes as the teacher read them, he was not proficient enough, and often relied on his memory. From his exasperated tone, it was apparent Nick felt disadvantaged by the situation, but was reluctant to approach teachers as he didn’t want to “be a nuisance.”

Steve was the only student to use a monocular. He appeared unperturbed by how his peers might view him, while other students were reluctant to use such assistive technology, for as expressed by James, using a monocular was not a “good look.” James was provided with a ClearNote, a machine which displayed work from the board onto a screen, but he found this

took too long to set up, was heavy and blocked other students' view, and with little training given on its use, he could not see the benefits. So, James "just stopped getting it out." It was apparent the mere provision of equipment was not enough, and James needed teacher support for the use of his equipment. Although James knew it had benefits, he was reluctant to restrict his peers' view and annoy teachers, putting them before his own personal needs

James, Edward, Steve and Alex all tried using a mimio, a portable device which, when mounted on the whiteboard, could take pictures of what was on the board and relay them directly to their computers. Unfortunately, this was found to be challenging not only because of difficulties with the equipment itself, but because of the lack of knowledge and understanding of the equipment by teachers. As commented by Alex:

I was using a Mimio device that stuck to the wall. It was from 1992 and had very little signal! And hardly any teachers could be bothered with it. They would start writing on the board before I could get it set up and working and it was all rather painful.

Other participants experienced similar difficulties, telling of the mimio sliding down the wall, the pens losing their lids and drying out and batteries dying. Even when access to what was on the board was made possible by the mimio, all participants found it was too time consuming to convert the text from the images into a word document by typing the notes out. No participant appeared to have worked with their teacher to determine how to record the images in a manner which would have resulted in a collection of notes like those of their peers. All admitted to disarrays of accumulated images. James commented that he would end up with "lots of unfiled images", confessing to looking back over images "only about 10 per cent of the time." It was apparent schools provided equipment, and the participants tried to use it, but teachers did not seem to have the expertise or inclination to assist students with its use.

Some participants tried taking photos of the board using a camera connected to their computer, or using an iPad or iPhone. As Nick described:

I have a Sony lens camera ... I can set it anywhere in the room. It is wireless. I can sit anywhere in the room. Basically, it used to take ages because I didn't know how to use it properly. I didn't get any good training. Like I have never really had proper training with any of my equipment.

Nick's use of the camera was short lived.

Emma used her phone.

I often will take them [images] on my phone. It's annoying because then you have to go home and write them down. It just takes more of your time, but yeah, I do that if I have missed things.

Participants and teachers had not worked together to ensure a satisfactory arrangement for the use of equipment for board access, even when equipment was provided.

All participants felt that rewriting notes from the down-loads or photos was like repeating the whole day again, and as they often experienced eye fatigue and exhaustion after the full day, the hours required meant this rarely occurred. Participants tried to organize their down-loads into topic files, but most admitted to this as a poor substitute for writing the class notes. All participants had asked teachers, in their vision impairment statements presented to staff at the commencement of the school year, to send any notes to be written on the board before the lesson via email. This rarely happened, but when it did, students found it helpful. As Nick stated, "When I do get sent things I can look on with the rest of the class. Then I put them into each subject. And I can go through things ... but getting material has not been easy, no. Definitely not."

James had a Victorian Certificate of Education (VCE) class where all notes were presented to the class as a PowerPoint. He was successful in collating a set of notes like those of his peers, as the work presented to the class was then sent directly to his computer. He could interact with the rest of the class as the teacher went through the notes on each slide. It was the only subject in which James had access to notes similar to his peers from which to study, and he attributed his achievement of his highest score in the VCE examinations in this subject to this access. He was very proud of his achievement, as it indicated to himself and others what he was capable of when given the same access to the work as his peers.

### **Worksheet access**

All participants requested that worksheets be emailed or presented on A4 in their preferred font and font size. However, worksheets were generally enlarged to A3, with equity of access problematic, particularly as teachers discussed important points while students with vision impairment were still waiting for their enlarged copy, or had to leave the class to photocopy an enlargement themselves. Meanwhile peers would be making notations and

highlighting significant points. Edward stated teachers were “chronic” in forgetting to enlarge notes even in A3 format and he was always having to miss some of the class to go and get a photocopy done himself. As Nick explained, he often had to “wait an extra 10 minutes” to get it copied and [meanwhile] the teacher goes through explaining all of it. Receiving worksheets enlarged to A3 were considered an “organizational nightmare” as students could not readily identify what the worksheets were once they were folded after the class. Unlike their peers, participants could not collate a readily accessible set of worksheets. The small print of A3 was also reported to restrict speed of reading and cause eye strain and tiredness.

It was apparent from the participants comments and exasperated tones that they felt more could have been done to provide better access to the work, however, they made excuses for teachers, commenting they felt teachers were often “too busy.”

Only Holly, using a braille note, could successfully view worksheets.

If I had a worksheet or SAC [School Assessed Coursework in year 12] or whatever, I would put it in my scanner and it scans the information - takes a picture – and the document appears on my screen. And I have a screen-reader and my laptop talks.

Unlike the other participants, Holly was the only student to have regular meetings with a specialist visiting teacher. Others had a maximum of three visits a term, if any.

Emma was studying music, playing the piano. She stated,

With my music I have always memorised pieces so I don't have to read the music while I played ...But in the last couple of years I have found that harder to do so I have been enlarging the music so that it is in like these huge A3 sheets and it is a bit of a hassle while I am learning them...I have to do a sight reading examination, which is when they give you music you haven't seen and you have to look at it and play it. I have asked for a teacher to enlarge that, so that is what she will do for me [embarrassed laugh]

Although Emma is entitled to an enlarged copy she feels embarrassed that she had to ask. She was made to feel that it was something of an imposition to expect an enlargement rather than simply part of her right to be treated as an individual.

### **School and teacher limitations**

Alex would have liked to braille but was unable to do so effectively, explaining, “I can braille; however, the braille machine is significantly slow compared to a normal computer and it has a lot of compatibility issues with the school systems.” These difficulties were on going. Although Alex felt he was quite competent with technology, he felt the school did not help, and consistently faced difficulties related to access and equipment issues.

Compatibility issues were also raised by other participants and were not quickly resolved. Nick had used ZoomText [an integrated magnifying and screen reading program] on his computer in primary school, but on changing schools experienced major problems, stating “I always used ZoomText ... But I couldn’t use it for nearly two years when I changed schools because their systems were too new for the program.” Not being able to access this magnifying program for such an extended period was very debilitating for Nick, and although he and his parents asked for school support, it was very slow to eventuate. There appeared a lack of appreciation by teachers of the impact this was having on Nick’s learning.

Alex experience similar issues:

ZoomText and things were all rather buggy on the school PC ... but they would say “its equipment – you have to use this.” I really didn’t quite understand their fixation on equipment when that equipment didn’t work – and they couldn’t help!

All participants experienced the lack of expert technological support, as teachers and aides had little knowledge of the technology. Some students found they were forced to try technologies without having any training or assistance. Alex recounted:

I used to be a technology guinea pig. Basically, anything that came out ... they just had to try it out on me ... they were presenting it as a great opportunity but ... basically using me as testing ground. I tested various random software ... I used various kinds of braille machines, braille displays, lots of very annoying magnifiers. Nothing really helped, as most of the stuff was quite useless because there was no training.

The frustration was clear in Alex’s voice, and his feeling of annoyance at the lack of consultation about the technology was apparent.

Participants revealed teachers and aides had little understanding of the technology and how it operated, or of the specific challenges associated with vision impairment, which lead to frustration and wariness. As noted by Alex, lack of teacher knowledge often caused difficulties, such as when it was recommended he use a large mouse cursor. The problem was that with the degree of magnification he already used, the large cursor “occupied about ninety per cent of the screen.” As he pointed out, this was a good idea in theory but in practice totally ineffective.

One participant reflecting on the lack of support in using technology, stated

Technology has not been easy. It has been all though me [my effort]. You can get someone to come in and show you but I haven’t had anyone come in and show me. I just had to play around with it for some time just to get it going.

Another participant drew attention to practical difficulties

It was difficult carting all the equipment around. It’s heavy with my computer and all the gadgets like magnifiers and the mimio which didn’t work properly. But they would say its equipment – you have to. I really didn’t quite understand their fixation on equipment when that equipment didn’t work and I wasn’t shown how to use properly.

Holly made the observation that

Sometimes it is the newer teachers that understand about technology and things like that and they are a bit keener to learn and go through things, but ... it is hard.

Teachers and aides were not in proficient with the technology used, and were therefore unable to assist when problems arose. There was little evidence of working together to get the best possible outcomes from the technology.

### **Time**

Participants all found time to be a major issue. The time taken to rewrite the notes from the images taken of the board meant almost redoing the whole class again, and when there were five to six classes a day, this was “just not possible.” Participants were unable to create a set of notes like those of their peers, admitting to an awareness of the negative effect this could have. As Edward stated, “it was probably more than I am willing to admit, to be

honest.” Finding time for investigating and learning to use new technologies was problematic with many instances cited, such as not using voice activation software because “I haven’t the time to really investigate this.” As Nick explained, “it used to take ages [to use the technology] because I didn’t know how to use it properly. I didn’t get any good training.

### **Recent technology**

The participants were rarely given specialist advice on the use of their technology, and were often left to “find out about it” themselves. Edward recalled that it was only at the start of his final year of schooling (Year 12) that he began to use an iPad. The family had bought one for his mother to use but Edward started to use it. He quickly realised that it had many good applications that were relevant to his school work. He found the iPad “really, really helpful and a great resource.” Edward purchased eBooks for English literature in preference to hard copy texts. Using eBooks, he could highlight texts and add notes. He was quite animated and excited about the uses of the iPad, and would have appreciated an earlier introduction, and some training.

The possible benefits to students of using new or recent technology were highlighted, particularly with respect to independence. Emma and Edward explained their use of phone apps.

If I am lost I can just google maps and figure it out from there ... the transport app I use sometimes ... I have been on trams and not known when I am supposed to get off but you can get on the app and watch yourself moving along until you get to the stop ... Because if I am looking out the window I can’t read the signs.

and

Technology has helped - Journey planner and stuff is really helpful as you already have a pretty solid idea of what you have to do in order to get from A to B. And yes, I guess just as I have used it a bit more; confidence has grown.

Participants relied on technology to gain access to the curriculum as presented to their peers. Their time management, organizational skills and initiative were constantly tested as they strove to find the means to use technology effectively with little input and expertise from their teachers.

## Discussion

Vision impairment is a significant barrier to learning and development, and students with vision impairment “fall further behind their sighted peers every year that they continue not to use assistive technology to experience the benefits of electronic information sharing” (Kelly, 2009, p. 478). As for the participants in this study, past research revealed that students with vision impairment were concerned about “good access to the curricula, the lack of teacher understanding in making information accessible and not having the relevant technology” (Cochrane, Lamoureux & Keeffe, 2008, p. 117). Participants found teachers’ knowledge and understanding of the assistive technologies insufficient for their needs, and equitable access unachievable. Participants were unable to access information from the board or from worksheets with any consistency, and teachers did not have the skills or training to support the use of assistive technologies to overcome these difficulties. Research supports the notion that teachers’ deficits in assistive technology proficiency “negatively impact students with vision impairment, stunting the development of skills” (Siu & Morash, 2014, p. 384), with studies showing that “teachers are not prepared to use assistive technology, much less teach students how to use it” (Safhi, Zhou, Smith & Kelley, 2009, p. 562). Participants attributed the lack of teacher expertise with assistive technology as a major issue restricting equitable participation in the curriculum. Teachers often failed to recognize assistive technology as a necessity for students with vision impairment, and their lack of engagement and expertise resulted in exclusionary practises. Whether the lack of teacher expertise resulted because of the lack of training available to them or a lack of willingness to become proficient in the technology is unclear. An influencing factor for teacher expertise may have been the limited time a secondary teacher is involved with the participant, often only teaching the participant for one year, and the participant likely to be the only vision impaired student in the school.

Participants in this study, like those in previous research, tended to shy away from any equipment that singled them out preferring to use technology available to all students (Opie & Southcott, 2015). Although the use of assistive technologies involving cameras and monitors may be available, student acceptance of these devices, the time required to set them up in the classroom, the battery life and availability of a power supply to recharge, and the cost of purchase, maintenance and repair all contributed to their limited use (Kapperman, Sticken & Heinze, 2002; Söderström & Ytterhus, 2010; Wolffsohn, Peterson & Alves, 2003). Participants lamented the time pressures they were under, in both using and learning technology.

Consumer electronic devices such as smartphones, tablet computers, and e-book readers containing accessibility features such as large print and speech have reportedly become far more widely used in recent years by students with vision impairment (Crossland, Silva & Macedo, 2014). Students with vision impairment can operate the smartphone camera and screen as a magnifier. Because any student may use the smartphone, it is more socially acceptable to students with vision impairment who avoid standing out from their peers, allowing for more independence (Thomas, Barker, Rubin & Dahlmann-Noor, 2015). Participants in this study, however, had limited use of iPads, and were often the only students in the class using a computer. The use of iPhones in particular was actively discouraged in class. Crossland et al. (2014), in their study of the use of the smartphone, tablet computer and e-reader, found barriers to the devices being used included “a lack of awareness of how useful these devices could be for people with vision impairment, and not having considered using these systems” (p. 556). Findings of this study concur, as participants only found out about electronic devices and operations either online or through friends, and only a few found out from an organisation for the vision impaired, their optometrist, an ophthalmologist or a teacher. Nevertheless, with the less specialized nature of these devices, and more extensive use becoming common for all students in a classroom, expertise by teachers may be more forthcoming, and students with vision impairment able to benefit.

As well as improving access to written material, assistive technologies may also enable social media and real-time information available via the internet (Thomas, Barker, Rubin & Dahlmann-Noor, 2015), with such learning experiences promoting self-efficacy, autonomy, self-regulation, independence, and knowledge retention for students with vision impairments (Kelly & Smith, 2011). Students in this study all admitted to using Facebook for social interaction, particularly effective for them as they could “interact without people moving off.” Technology skills have also been related to improved postsecondary education outcomes and employment for students with vision impairments (Kelly, 2009, Kelly & Wolffe, 2011; Ravenscroft, 2013). Support for teachers to address technology use and instruction is critical in order to close the achievement gap between students with and without disabilities both educationally and socially (Parette & Peterson-Karlan, 2007).

Participants in this study all found access to work on the board and access to worksheets problematic, although there are technologies which could allow for access more on a par with their peers. Teachers had limited understanding of vision impairment and the dependence of participants on assistive technology to gain equality of access. Teachers lacked the expertise necessary for technology introduction and support. Schools did not

appear to have policies in place regarding technology use and the provision of expert training for students with vision impairment and their teachers.

## **Conclusion**

Access to mainstream education curriculum and learning materials using assistive technology can facilitate students with vision impairment in learning on a par with their non-disabled peers in the mainstream classroom, breaking down all barriers which prevent them from having equal access to quality education. This is a digital era, with innovative technologies continually developing. Although technologies should enable students with vision impairment in their endeavour to access the curriculum equitably with peers, they are thwarted in their efforts by ignorance of what is available, restriction of use, and insufficient technical expertise and training which negatively affects advancement. It is vital to consider the applicability of the technology and its effectiveness, ensuring proper identification of the devices needed for successful implementation through an approach incorporating both feasibility and effectiveness.

Researchers, practitioners, schools and teachers need to identify ways to encourage the development and use of appropriate technology, working together with students with vision impairment on issues concerning the use of technology for their effective inclusion in mainstream schools. The lack of teacher support and training significantly reduces the effective use of technology. Challenges for schools having a student with vision impairment enrolled will involve how to induct staff into teaching with technology, both instructive and assistive, defining and providing appropriate professional development for ongoing enhancement, and providing appropriate external technology support. Only by school policy addressing these issues will students with vision impairment be assured of their entitlement to the same quality and effective instruction accessible to their peers.

## **References**

Adderley, R., Hope, M., Hughes, G., Jones, L., Messiou, K. & Shaw, P. (2015). Exploring inclusive practices in primary schools: Focusing on children's voices. *European Journal of Special Needs Education*, 30(1), 106-121.

- Ajuwon, P. M., Meeks, M. K., Griffin-Shirley, N. & Okungu, P. A. (2016). Reflections of teachers of visually impaired students on their assistive technology competencies. *Journal of Visual Impairment & Blindness*, 110(2), 128-134.
- Australian Curriculum (2015). *Student Diversity*. Retrieved from <https://www.australiancurriculum.edu.au/studentdiversity/students-with-disability>
- Australian Government Department of Education and Training (2016). *Disability standards for education 2005: 2015 review submissions*, Vision Australia. Retrieved from <https://education.gov.au/2015-review-submissions>
- Bausch, M. E. & Ault, M. J. (2008). Assistive technology implementation plan: A tool for improving outcomes. *Teaching exceptional children*, 41(1), 6.
- Bouck, E. C. (2010). Technology and students with disabilities: Does it solve all the problems. *Advances in special education*, 20, 91-104.
- Brocki J. M. & Wearden A. J. (2006). A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology and Health*, 21(1), 87-108.
- Brown, C. M., Packer, T, L. & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education*, 46(4), 223 - 232. DOI: 10.1177/0022466910397374
- Bryant, B. R., Bryant, D. P., Shih, M. & Seok, S. (2010). Assistive technology and supports provision: A selective review of the literature and proposed areas of application. *Exceptionality*, 18(4), 203-213. doi: 10.1080/09362835.2010.513925
- Byrnes, L. J. & Rickards, F. W. (2011). Listening to the voices of students with disabilities: Can such voices inform practice? *Australasian Journal of Special Education*, 35(1), 25-34.
- Chambers, D. J. (2011). *Assistive technology: Effects of training on education assistants' perceptions of themselves as users and facilitators of assistive technology and consequent transfer of skills to the classroom environment* (Doctoral dissertation). Retrieved from University of Notre Dame Australia. <http://researchonline.nd.edu.au/theses/62>
- Clark, A. & Moss, P. (2011). *Listening to young children: The mosaic approach*. Jessica Kingsley Publishers.
- Cochrane, G., Lamoureux, E. & Keeffe, J. (2008). Defining the content for a new quality of life questionnaire for students with low vision (the impact of vision impairment on

- children: Ivi\_c). *Ophthalmic Epidemiology*, 15(2), 114-120. doi:  
doi:10.1080/09286580701772029
- Canadian Library Association (CLA). (2000). *CLA submission to the task force on access to information of print disabled Canadians*. Retrieved from  
<http://www.cla.ca./top/whatsnew/wnoc20042.htm>.
- Commonwealth of Australia (1992). *Disabilities discrimination act 1992*. Retrieved from  
<https://www.legislation.gov.au/Details/C2014C00013>
- Commonwealth of Australia (2006). *Disabilities standards for education 2005*. Retrieved from  
<http://education.gov.au/disability-standards-education>
- Commonwealth of Australia (2016). *2015 Review submissions*. Retrieved from  
<https://www.education.gov.au/2015-review-submissions>
- Constantinescu, C. (2015). *Assistive technology use among secondary special education teachers in a private school for students with specific learning disabilities: types, levels of use and reported barriers*. UMD Theses and Dissertations: DRUM  
Retrieved from <http://drum.lib.umd.edu/handle/1903/17051>
- Cox, P. R. & Dykes, M. K. (2001). Effective classroom adaptations for students with visual impairments. *Teaching Exceptional Children*, 33, 68-74.
- Crossland, M. D., Silva, R. S. & Macedo, A. F. (2014). Smartphone, tablet computer and e-reader use by people with vision impairment. *Ophthalmic and Physiological Optics*, 34(5), 552-557.
- D' Andrea, F. M. & Siu, Y. T. (2015). Students with visual impairments: Considerations and effective practices for technology use. In *Efficacy of Assistive Technology Interventions* (pp. 111-138). Emerald Group Publishing Limited.
- Dalton, E. M. & Roush, S. E. (2010). Assistive and educational technology standards and teacher competencies in relation to evidence-based practice: Identification and classification of the literature. *Journal of Special Education Technology*, 25(2), 13-30.
- Deppeler, J., Forlin, C., Chambers, D., Loreman, T. & Sharma, U. (2015). Equity and quality in inclusive education in Australia: The case of students with disabilities. *Recherches and Éducatons*, 14, 49-64. Retrieved from  
<http://rechercheseducations.revues.org/2367>
- Department of Education and Training, Victoria (DET) (2015). *Program for students with disabilities – Guidelines for schools, 2016*. Retrieved from

<http://www.education.vic.gov.au/about/programs/needs/Pages/disabilityprogram.aspx>

- Devlin, M. (2013). *eLearning Vision*. Federation University Australia. Retrieved from [https://federation.edu.au/\\_\\_data/assets/pdf\\_file/0020/159122/FedUni\\_eVision2014.pdf](https://federation.edu.au/__data/assets/pdf_file/0020/159122/FedUni_eVision2014.pdf)
- Douglas, G., McLinden, M., McCall, S., Pavey, S., Ware, J. & Farrell, A. M. (2011). Access to print literacy for children and young people with visual impairment: Findings from a review of literature. *European Journal of Special Needs Education*, 26(1), 25-38. doi: 10.1080/08856257.2011.543543
- Finlay, L. (2008). A dance between the reduction and reflexivity: explicating the “phenomenological psychological attitude.” *Journal of Phenomenological Psychology*, 39, 1-32.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of “seeing afresh.” *Journal of Humanistic Psychology*, 53(2), 172-201.
- Flanagan, S., Bouck, E. C. & Richardson, J. (2013). Middle school special education teachers’ perceptions and use of assistive technology in literacy instruction. *Assistive Technology*, (25)1, 24-30, DOI: 10.1080/10400435.2012.682697
- Foreman, P. (2011). Introducing inclusion in education. In P. Foreman (Ed.), *Inclusion in action 3rd ed.* (pp. 2-34). Australia: Cengage.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J. & Sharma, U. (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Braddon, ACT: Australian Research Alliance for Children and Youth. (ARACY)
- Houghton, C., Casey, D., Shaw, D. & Murphy, K. (2013) Rigour in qualitative case-study research. *Nurse Researcher*, 20(4),12-17.
- Individuals with Disabilities Education Act (2004). P. L. 108-446. Retrieved from <https://www2.ed.gov/policy/speced/leg/idea/idea.pdf>
- Jones, P. (2014). Whose insider perspectives count and why should we consider them? In P. Jones, (Ed.). *Bringing insider perspectives into inclusive teacher learning: Potentials and challenges for educational professionals* (pp. 1-8). Hoboken, NJ: Taylor and Francis.
- Kapperman, G., Sticken, J. & Heinze, T. (2002). Survey of the use of assistive technology by Illinois students who are visually impaired. *Journal of Visual Impairment and Blindness*, 2,106-108.

- Kelly, S. M. (2009). Use of assistive technology by students with visual impairments: Findings from a national survey. *Journal of Visual Impairments and Blindness*, 103, 470-480.
- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment and Blindness*, 105, 235-239
- Kelly, S. M. & Smith, D. W. (2011). The impact of assistive technology on the educational performance of students with visual impairments: A synthesis of the research. *Journal of Visual Impairment and Blindness*, 105, 73-83.
- Kelly, S. M. & Wolffe, K. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment & Blindness*, 105, 340+.
- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, M. J. & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Media Access Australia (2013). *Inclusion Through Technology. Vision Education Scoping Report*. Retrieved from <https://mediaaccess.org.au/education/low-vision-blindness/vision-education-scoping-report>
- Messiou, K. (2012). *Confronting marginalisation in education: A framework for promoting inclusion*. New York, London: Routledge.
- Mulloy, A. M., Gevarter, C., Hopkins, M., Sutherland, K. S. & Ramdoss, S. T. (2014). Assistive technology for students with visual impairments and blindness. In *Assistive technologies for people with diverse abilities* (pp. 113-156). Springer New York.
- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International journal on school disaffection*, 11(2), 67-81.
- Pagliano, P. (2002). Using all the senses. In A. Ashman & J. Elkins (Eds.), *Educating children with diverse abilities* (pp. 237–253). Frenchs Forest, Australia: Pearson.
- Palfrey, J. & Gasser, U. (2013). *Born digital: Understanding the first generation of digital natives*. Basic Books.
- Parette, H. P. & Peterson-Karlan, G. R. (2007). Facilitating student achievement with assistive technology. *Education & Training in Developmental Disabilities*, 42, 387–397.

- Ravenscroft, J. (2013). High attainment low employment: The how and why educational professionals are failing children with visual impairment *The International Journal of Learning*, 18, 135-144.
- Safhi, M. Y., Zhou, L., Smith, D. W. & Kelley, P. (2009). Assistive technology in teacher-training programs: A national and international perspective. *Journal of Visual Impairment & Blindness*, 103, 562–568.
- Segers, K. S. (2014). *Assistive technology for students with visual impairments: In-service teacher training and its relationship to student access and usage across academic subject areas* (Doctoral dissertation, Capella University).
- Simpson, C. G., McBride, R., Spencer, V. G., Lowdermilk, J. & Lynch, S. (2009) Assistive technology: Supporting learners in inclusive classrooms. *Kappa Delta Pi Record*, 45(4), 172-175.
- Siu, Y.-T. & Morash, V. S. (2014). Teachers of students with visual impairments and their use of assistive technology: Measuring the proficiency of teachers and their identification with a community of practice. *Journal of Visual Impairment & Blindness*, 108(5), 384-398.
- Smith, A. J., Geruschat, D. & Huebner, K. M. (2004). Policy to practice: Teachers' and administrators' views on curricular access by students with low vision. *Journal of Visual Impairment & Blindness*, 98(10), 612-628.
- Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis'. *Health Psychology Review*, 5(1), 9-27.
- Smith, J. A. (2015). *Qualitative psychology : A practical guide to research methods*. London: SAGE.
- Smith, J. A., Brewer, H. M., Eatough, V., Stanley, C. A., Glendinning, N. W. & Quarrell, O. W. J. (2006). The personal experience of juvenile Huntington's disease: an interpretative phenomenological analysis of parents' accounts of the primary features of a rare genetic condition. *Social and Behavioral Research in Clinical Genetics*, 69(6), 486-496.
- Smith, J. A. & Eatough, V. (2007). Interpretative phenomenological analysis. In E. Lyons & A. Coyle (Eds.), *Analysing qualitative data in psychology* (pp. 35-50). London, England: Sage.
- Smith J. A., Jarman, M. & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M Murray & K Chamberlain (Eds.), *Qualitative Health Psychology: Theories and Methods*, (pp. 218–240). London: Sage Publications.

- Söderström, S. & Ytterhus, B. (2010). The use and non-use of assistive technologies from the world of information and communication technology by visually impaired young people: A walk on the tightrope of peer inclusion. *Disability & Society*, 25(3), 303-315.
- South Australia Department for Education and Child Development (2016). *School for vision impaired*. Retrieved from <http://www.sasvi.sa.edu.au/curriculum.htm>
- Statewide Vision Resource Centre. (2015). *Support for school-aged children with vision impairments in Victoria*. Retrieved from [http://svrc.vic.edu.au/Support\\_Vic\\_VI.pdf](http://svrc.vic.edu.au/Support_Vic_VI.pdf)
- Tew, J., Bennett, A. L. & Dixon, L. (2016) The Chromis experience: An interpretive phenomenological analysis of participants' experiences of the Chromis programme. *International Journal of Offender Therapy and Comparative Criminology*, 60(4), 1669-1689.
- Thomas, R., Barker, L., Rubin, G. & Dahmann-Noor A. (2015). Assistive technology for children and young people with low vision. *Cochrane Database of Systematic Reviews* 6 DOI: 10.1002/14651858.CD011350.pub2.
- United Nations. (2006). *Final report of the ad hoc committee on a comprehensive and integral international convention on the protection and promotion of the rights and dignity of persons with disabilities*. Retrieved from <http://www.un.org/esa/socdev/enable/rights/ahcfinalrepe.htm>
- Wagstaff, C., Jeong, H., Nolan, M., Wilson, R., Tweedlie, J., Phillips, E., Senu, H. & Holland, F. (2014). The Accordion and the Deep Bowl of Spaghetti: Eight researchers' Experiences of Using IPA as a Methodology. *The Qualitative Report*, 19(47), 1-15.
- Whitburn, B. (2014). Accessibility and autonomy preconditions to 'our' inclusion: A grounded theory study of the experiences of secondary students with vision impairment. *Journal of Research in Special Educational Needs*, 14(1), 3-15.
- Wolffsohn, J. S., Peterson, R. C. & Alves, C. C. (2003). A review of current knowledge on Electronic Vision Enhancement Systems for the visually Impaired. *Ophthalmic and Physiological Optics* 23(1), 35 - 42
- World Health Organization and World Bank (2011). *World report on disability*. Retrieved from [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf)
- Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology & Health*, 15(2), 215-228.

- Zhou, L., Ajuwon, P. M., Smith, D. W., Griffin-Shirley, N., Parker, A. T. & Okungu, P. (2012). Assistive technology competencies for teachers of students with visual impairments: A national study. *Journal of Visual Impairment & Blindness*, 106(10), 656.
- Zhou, L., Smith, D. W., Parker, A. T. & Griffin-Shirley, N. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105(9), 533.

## Chapter 11

### **Educating students with vision impairment today: Consideration of the expanded core curriculum.**

This is the third article that addresses concerns held by all seven participants, and expands on the difficulties arising when problem areas specific to students with vision impairment remain unacknowledged. From the experiences of the students, it was apparent that Visiting Teachers (VTs) were unable to guarantee all components of the ECC were provided, and incapable of ensuring teachers knew the essential nature of these extra curricula components and their implementation. Areas of access to the curriculum, assistive technology skills, social skills, recreational skills and career counselling were all found to be particularly concerning, with students revealing many hardships caused by ineffective curriculum delivery, social isolation, lack of self-determination skills and exclusion from core curriculum areas which were not challenged by VTs.

How components of the ECC may be delivered when and where needed, given the time constraints of the school day and the availability of VTs, remains an ongoing debate. As it is evident that VTs are unable to deliver the essential elements of the ECC, provision by others including teachers and aides must be considered.

# Educating students with vision impairment today: Consideration of the expanded core curriculum

British Journal of Visual Impairment

1–15

© The Author(s) 2017

Reprints and permissions:

[sagepub.co.uk/journalsPermissions.nav](http://sagepub.co.uk/journalsPermissions.nav)

DOI: 10.1177/0264619617730861

[journals.sagepub.com/home/jvi](http://journals.sagepub.com/home/jvi)



**Jill Opie**

Monash University, Australia

## Abstract

A phenomenological study was undertaken giving students with vision impairment the opportunity to voice their experiences of secondary schooling in mainstream schools. Policies of inclusion were considered, with analysis of how training and curriculum came together, as experienced by these students, to develop their inclusion in schools in Victoria. Interviews of each participant using interpretative phenomenological analysis revealed a number of themes, with lack of teacher understanding of vision impairment a common theme across all cases. The limited access to visiting teachers, specialists in vision impairment, point to the need for alternatives in the delivery of necessary expanded core curriculum components. It is proposed that teachers of these students would benefit from an online unit to educate them in vision impairment in order to eliminate unintentional exclusion practices currently experienced, and encourage them to incorporate components of the expanded core curriculum into their everyday practices. The need for further research is indicated.

## Key Words

vision impairment, expanded core curriculum, interpretative phenomenological analysis, mainstream secondary school, inclusion

\

## **Educating students with vision impairment today: Consideration of the expanded core curriculum.**

*“The ECC is the heart of the responsibility of educators serving visually impaired students ... and it epitomizes their “right to be different” (American Foundation for the Blind, 2017).*

### **Introduction**

It is accepted globally that all students have the right to a quality education. The United Nations Convention on the rights of Persons with Disabilities (UN, 2006) ratified by more than 80 signatories including Australia in 2006, refers to an education that ensures the right to education of persons with disabilities at all levels, aiming to eliminate the barriers that exclude or marginalize these learners. Education providers are to ensure there is no exclusion from the general education system on the basis of disability, with Australia espousing an inclusive education approach that promotes the “equal and active participation of all people with disability” (Forlin, Chambers, Loreman, Deppeler & Sharma, 2013, p. 4). Students “are to receive the support they require within the general education system to facilitate their effective education,” and effective support measures are to be provided “that maximize academic and social development, consistent with the goal of full inclusion” (UN, 2006, Article 24, 2). Measures taken include “facilitating the learning of Braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring” which may require “measures taken to employ teachers ... who are qualified in Braille, and to train professionals and staff who work at all levels of education” (UN, 2006, Article 24, 3). The body of knowledge and skills needed by students with vision impairment due to their unique disability-specific needs is coined the Expanded Core Curriculum (ECC) (Hatlen, 1996). Although not explicitly mentioned, policies clearly support the provision of instruction in all the areas of the ECC, since these are functional and educational needs that result from vision disability (Sapp & Hatlen, 2010) and must be mastered for success “in school, obtain employment and fully participate in society” (Wolffe & Kelly, 2011).

Although this paper will focus on schooling in Australia, the ECC is a globally recognized prerequisite to the inclusion of students with vision impairment (those who are blind or have low vision) in schools. Instruction for students with vision impairment should

include the core curriculum as well as instruction in areas that are directly affected by a child's vision impairment (Sapp & Hatlen, 2010, p. 2). The ECC is not seen as an optional part of a vision impaired student's educational program but an essential part that must be taught, compensating for experiences that are typically learned incidentally by sighted children through observing role models visually (Lohmeier, Blankenship & Hatlen, 2009). Without training in the ECC skills, students who are vision impaired have difficulty accessing the standard core curriculum or engaging in many of the activities that are basic to their well-being (American Federation for the Blind, 2017; Statewide Vision Resource Centre, [SVRC], 2016). Attendance at local mainstream schools is the norm for most children with visual impairment in Australia. However, it is unknown whether regular schools provide an adequately inclusive environment for these students. The ECC contains a raft of skills and concepts that are described briefly below.

### **The ECC**

The ECC comprises of nine areas: compensatory or access skills, orientation and mobility skills and concepts, social interaction skills, use of technology and assistive technology, career education, independent living skills, recreational and leisure skills, self-determination skills, and sensory efficiency skills (Kelly, 2015; Sapp & Hatlen, 2016; SVRC, 2016). Each is addressed in turn.

- Compensatory or access skills refer to the skills that students with vision impairment need to access all areas of the general education curriculum at a level equitable to their sighted peers in the most independent fashion possible (Sapp & Hatlen, 2010). Depending on the needs of the student, this can include concept development, spatial understanding, study and organizational skills, speaking and listening skills, and adaptations access such as the use of braille, large print, optical devices, tactile symbols, and recording materials.
- Orientation and mobility skills are needed for individuals with vision impairment to safely maneuver in their environment (Jacobson, 2012) and involve students learning about themselves and the environment in which they move, from basic body image to independent travel (Sapp & Hatlen, 2010).
- Social interaction skills used by sighted students are learned by visually observing the environment and other people, resulting in socially appropriate behaviors based on that information (Sapp & Hatlen, 2010; Zebehazy & Smith, 2011). As social

interaction skills learned by students with vision impairment in this manner are limited, there is a need for direct instruction (Sapp & Hatlen, 2010; Wolffe & Kelly, 2011).

- Assistive technology helps provide access to inaccessible educational material, equalizing the ability to access information between individuals with vision impairment and their sighted peers (Brown, Parker & Passmore, 2013; Sapp & Hatlen, 2010). Students use an array of technologies including computers with screen enlargement and screen reading software, video magnifiers, digital recorders and braillewriters. Assistive technology must be facilitated by professionals who understand how to use the equipment and how to teach its use (Wolffe & Kelly, 2011).
- Career education in the core curriculum allows students to understand different career paths. Sighted students have many opportunities to learn about careers and work habits through visual observation but to compensate for the lack of visual cues about work and jobs, students with vision impairment need authentic experiences with various jobs, which will allow them to make educated and independent decisions (Ravenscroft, 2013; Sapp and Hatlen, 2010; Wolffe & Kelly, 2011).
- Independent living skills provide the tools for living independent adult lives. Although these generally come easily to sighted individuals, activities of daily living including personal hygiene, food preparation and financial management must be taught to students with vision impairment (Sapp & Hatlen, 2010).
- Recreation and leisure skills are often an incidental part of the core curriculum. Sighted students select recreational activities in which to participate by observing a range of activities and making choices. Students with vision impaired need to be taught about the activities available and how to participate and become involved (Sapp & Hatlen, 2010).
- Self-determination refers to believing in oneself, understanding one's abilities and limitations, making choices and having control over life experiences (Lieberman, Haegele, Columa & Conroy, 2014). Self-determination skills have been related to a student's ability to explain their vision impairment, self-advocacy and ability to accept and decline help (Agran, Hong & Blankenship, 2007).
- Sensory efficiency addresses the use of residual vision, hearing, and other senses, learning how to use optical devices, hearing aids, augmentative communication

devices, and other supports to enable or enhance access to the environment (Sapp & Hatlen, 2016).

Students with vision impairment in contemporary Australia generally attend mainstream schools (Media Access, 2016). There remain concerns regarding the “educational price paid” for the benefits of social integration and in the provision of the ECC, resulting in students today not having “the same opportunities as previous generations” (Blind Citizens Australia, 2010, p. 7). Most general education curricula include skills that overlap with the ECC, such as working in groups (social skills), learning about different jobs (career education), reading a map (orientation and mobility), managing money (independent living skills and school camps (leisure skills). While many ECC skills can be embedded in the general education curriculum, it is important that specialist visiting teachers (VTs), who have expertise and practical experience in the field of vision impairment, provide instruction in teaching concepts, skills and knowledge that a student who is vision impaired is unlikely to acquire in the same manner as their sighted peers (Vision Australia, 2015; Sapp & Hatlen, 2010). In Australia, while VTs are regarded as best placed to implement these curriculum areas in schools, (SVRC, 2016; Vision Australia, 2016), there is concern regarding the lack of appropriately qualified and skilled VTs and their role (Brown & Beamish, 2013; Insight, 2016; Scott, 2009). VTs are expected to provide direct teaching of the ECC as well as “high-level advice and a range of supports to classroom teachers, education support staff, students, families and the wider school community” (Victoria State Government, 2012, p. 48). In Victoria, VT’s are more available to state schools, as students at independent schools have more limited governmental funding, often equating to only one or two visits per term. Students may also access the VRC for provision of support including materials in alternative formats, and Guide Dogs and Vision Australia, who support the orientation and mobility of students attending schools, camps and sporting activities.

The focus of this research was to gain an understanding of how students with vision impairment in secondary schools in Victoria were experiencing mainstream education, seeking to hear the voices of students themselves (Byrnes & Rickards, 2011; Jones, 2014). Specifically, the provision of the ECC and the impact this has on schooling was considered in the light of student revelations about their education. The underlying question was, can schools supported by VTs satisfactorily provide the ECC to secondary school students attending state and independent schools? The experiences of students with VTs and provision

of the nine areas of the ECC were considered in detail, to understand the extent of ECC delivery and barriers students may encounter in accessing a quality inclusive education.

## **Methodology**

Interpretative phenomenological analysis (IPA) was the qualitative research approach used in exploring the experiences of seven students with vision impairment from mainstream secondary schools in Victoria. Students opted into the study by replying to an explanatory letter printed in an online Guide Dogs newsletter calling for senior school students happy to talk about their schooling. Guide Dogs Victoria (2016) has provided support for Victorians with low vision or blindness since 1957, with services today including training and education programs in addition to dog training. All seven students who applied participated. Three girls and four boys opted into the study. One student was in Year 10 and the others in Year 12, the final year of schooling, with two attending state schools and the others attended elite fee-paying independent/private schools. One student was blind and used braille, four students were legally blind with less than 6/60 visual acuity or less than 10° visual field in their better eye (SVRC, 2016), and two were vision impaired. Ethical approval was given for this study by Monash University Human Research Ethics committee. No student names are used to protect their privacy.

Each student was considered as an individual case. The case is central to the inquiry; the researcher attempted to understand as much about one case before moving onto the next (Cassidy, Reynolds, Naylor & De Souza, 2011). The intensity of activity for each case means that IPA studies are usually conducted on relatively small sample sizes that are sufficient for the potential of IPA to be realised (Smith, Flowers & Larkin, 2009). Each student was interviewed using in-depth, semi structured interviews which were audio recorded and transcribed. Students undertook two or three interviews, each of approximately one hour in duration at a venue of their choosing. The first interview was to establish the context of the participants' experience in relation to their schooling and to establish a rapport. General open questions regarding the participant's vision impairment and memories of primary school followed. The second and third interviews allow participants to delve deeper into the details of their experiences, reflecting and elaborating on issues raised earlier. Questions were of the following nature: Can you tell me about any assistance you have been given to participate in your secondary school programs? What do you consider to be the enablers and the barriers to accessing and participating in your subjects? Can you talk to me about your social network

and interactions with your peers? Answers were extended through a curious, persistent, and critical attitude and through prompted questioning of what had just been said. Also, a simple nod, or “mm,” or a pause invited the participant to go on with the description. A flexible interviewing process allows participants to respond freely with open-ended questions allowing for individual variation and for the interviewer to explore and probe within predetermined areas of inquiry (Knox & Burkard, 2009; Seidman, 1998).

Interviews were each analysed using IPA which is committed to the detailed analysis of personal experience, and involves a double hermeneutic, as the researcher tries to make sense of the participant and how the participant make sense of their experiences (Smith, 2017; Smith & Osborn, 2015). The researcher tries to understand their participant’s world, and to describe what it is like, balancing representation against interpretation and contextualization. IPA analysis revolves round the close reading and re-reading of the text (Smith et al., 2009). Transcripts were read line by line and analysed by searching for points of descriptive, linguistic, and conceptual note throughout. IPA involves maintaining an open mind and an exploratory attitude to produce a comprehensive and detailed account of the data while bracketing prior understandings and assumptions, adopting a genuinely open, curious, and at the same time a critical, self-aware stance (Finlay, 2008, 2013) Initial notes were transformed into emergent experiential themes which set out to capture the key elements of the participant’s experience framed by the interpretations of the researcher. To provide an overall structure to the analysis, the identified themes were grouped, the aim being to identify super-ordinate categories suggesting a hierarchical relationship between them (Southcott & Joseph, 2015). The collation of identified themes is supported with evidence from the interview, using quotations which the researcher feels best captures the essence of the participant’s thoughts and their emotions about the experience of the phenomenon being explored (Biggerstaff & Thompson, 2008; Larkin, Watts, & Clifton, 2006). The analytic process continued with a detailed examination of each case, followed by a search for the themes across cases.

The common theme relating to the provision of the ECC is considered in detail in this article. In addition to student interviews, interviews of three Heads of school educational support services and three aides were carried out, transcribed, and analysed, “to further contextualize the data” (Smith et al., 2009, p. 71). Findings related to school personnel are followed by data from students presented under the nine areas of the ECC.

## **Findings.**

### **School personnel**

Support for students with special needs in secondary schools is generally overseen by the school Head of Educational Support (HoES), a qualified teacher, who may or may not have additional qualifications in Special Education. As the HoES, this teacher is responsible for alerting staff to the needs of any student with vision impairment attending the school, to ensure provisions are made in exams, guide any aides employed for support and liaise with the VT and parents. As one HoES said of the ECC, “No, I don’t know what that is. What is it?” She added “We did get some mobility training for [the student] from Guide Dogs, and they assessed the grounds, identifying where yellow lines were to be put down. The HoES was responsible for the employment of the student’s VT and explained that, “She charges per hour plus travel, so this equates to only 8 sessions – about two per term.” She added, “The VT spoke briefly with staff at the beginning of the school year, but generally worked with the student on organizational skills really”. The HoES reflected, “What he [the student] really needed was someone to ensure he had keyboard skills ... He should have been touch typing. He didn’t have the full-on support from an experienced VT who may have enabled this.” Class teachers did not do any training prior to taking the student and as far as the HoES knew “nothing is available for staff that I’m aware of, no.” Other schools were also found to be unaware of the ECC. Another HoES with a student with vision impairment in Year 10 explained she had no previous experience of students with vision impairment, and thought the student attending was “a first for the school.” She stated, “I haven’t done a course or anything. I suppose there is something out there but I don’t really know. I just haven’t done this.” When asked about the services of a VT, she stated that because of limited funding and the expense of employing a VT, the funding was used “to support his attendance at a school camp.” She added, “I am going to make sure we do have a visit next year though because, on talking with the Victorian Curriculum and Assessment Authority we now know we must have the recommendations from a VT to get exam provisions.” She did not know what the ECC was, but later recalled having a sheet in her files given to her by a person from Guide Dogs. On finding the sheet she stated,

There is information on technology, lighting, print and all that sort of stuff. Career education ...etc. a lot of it is covered incidentally at the school. It details the ECC. But a

lot of it is his responsibility now at his age. It is up to him what technology to use. We don't do independent living skills – but he can do a lot of that ... He is supposed to participate in his own IEP [Independent Education Program] it says here – well there you go! I didn't realize that.

## **Participants**

Only the two participants from state schools had more than 6 sessions a year contact with a VT. One participant had been taught to braille when she first started her schooling at the only school for the blind still operating in Victoria at the time. However, with the closure of the school, her move to a state school had not been easy as she recalled “having a teacher aide in Grade 3 who “didn't actually know braille, and the year after I had a new teacher aide and she couldn't braille either.” She was satisfied with the regular visits from her VTs in secondary school, stating the VTs had all been supportive, both “for their help in the classroom and just to talk to about other things that are going on.” The other state school participant stated his VT “only advocated for being like everybody else, be normal.” He added, “I don't care about being different to every other kid, because I am different.” His experiences with his VT, aides, teachers and peers were “so negative,” he finally left the school to be home schooled as he was “extremely stressed” and felt his work was “being sabotaged.” He added, “I was too optimistic and thought that people actually meant it when they said we are here for you, but unfortunately I soon realized that it wasn't the case.” Participants were usually withdrawn from classes to have instruction from their VT, and most often these were sport classes. A participant found that VTs had set ideas of what technologies were to be used and even what pen must be used, “not seeing the possibility that you are really coping,” adding that sometimes they seemed to “mix up the idea of vision impairment with mental impairment.” The limited time VTs spent at schools supporting the needs of the participants with vision impairment appears insufficient for the development of teacher understanding. Experiences related to the nine areas of the ECC purportedly to be developed by VTs revealed needs which remained unaddressed, as illustrated further below.

Access to the curriculum on a par with peers had not been facilitated for any participant, with participants reporting many instances of barriers to learning and access to work provided to their peers. Although all participants gave their school a copy of their vision statement which included their favoured method for the provision of text materials, they invariably found teachers would enlarge worksheets to A3, disliked by them all because

of resulting organizational difficulties, and inappropriate font size. Teachers often forgot to enlarge and participants would either have to leave the room to do this themselves or wait for an aide to complete this task. One participant recalled that it was “annoying” having to go down to the photocopying room to get things blown up, which he had done “thousands of times!” Participants persistently asked for materials to be sent as emails, so they could “look on with the rest of the class,” but this was a rare occurrence. VTs often organized texts to be enlarged, but these were found to be cumbersome and isolating as they took up so much room, and consequently were avoided. As a participant explained, “one maths text came in ten huge volumes.”

Accessing information from the board remained extremely difficult for students, with participants revealing, “No I can’t get stuff off the board. I need it to be read out. She [teacher] discusses it in class anyway,” and “usually I listen and take notes as the teacher talks.” Participants generally tried to compile notes from the board by writing or typing as the teacher read out what they wrote, but often this was too fast or incomplete and participants were forced to rely on other students. As a participant explained, “I just wish she would dictate as she is writing. I always have to ask people near me ‘can you please read that to me’, ‘what does that say’, ‘what did she just write’ which can be embarrassing.”

Participants were often excluded from the more visual subjects, and no advice appeared to have been given by VTs regarding the legal responsibility teachers had regarding equity of access in all curriculum areas for students with vision impairment. On being excluded from science classes, participants felt it was most likely a result of perceived dangers when doing practicums, and maintained it was not their choice to be excluded from participation. As one participant put it, “I can’t because apparently, it [science] is all too dangerous.” Participants were not offered alternative ways of accessing practicums such as via demonstrations available on internet sites. Sport and Physical Education were also areas of exclusion, with all participants recalling exclusion from games and sporting activities. If they were included in games, it was usually to assist as a scorer. Only on rare occasions did teachers incorporate activities using items available for students with vision impairment, such as “using a bright orange puck” in hockey. Participants were often sent “to the support center to work” or “to the gym to use equipment such as an exercise bike.” One participant was expected to participate on the same basis as other students. He recalled an experience of table tennis with some anguish, being acutely embarrassed and distressed when his aide ran around chasing him trying to “stick a bat under my armpit” while saying “you have to be like everyone else.” He added, “Do I look like everyone else? Do I look like I can play table

tennis? That was not one of the best experiences.” No special equipment was provided for him. When asked if they had investigated swish, he replied “Exactly! My VT only advocated for me being like everybody else.”

Most participants felt they were competent in orientation and mobility skills having received training from Guide Dogs or Vision Australia. As one participant stated, “my VT didn’t know the school that well and her input wasn’t helpful.” Participants receiving orientation and mobility training appeared pleased with the support given, which included training in getting to and from school and in getting to know the school environment. Socially, participants experienced isolation, and few had developed any friendships. VTs did not ensure strategies were put in place to overcome this isolation. Most participants in this study were the only participant with vision impairment at their school. As a participant recalled, “people were kind of hesitant to be near me because I was out of the normal – a strange blind guy with a stick.” Several participants claimed they had no friends, while in the few instances where friends were mentioned these had invariably been made in the early primary years. No participant mentioned friendships with sighted peers originating from their secondary schooling. One participant had moved schools in secondary school, but returned to her local school attended by students from her former primary school “because I was just not that happy. It was mostly to do with friends, I hadn’t made any.” She added, she still did not have a best friend, but that “people have helped me out – I think because most of those people I have known for years so they are used to me and what I can and can’t do.” Most participants sat by themselves in class, and reported being alone at lunchtimes. A participant explained,

I am not going to lie. It is not easy ... Even if you just have one or two people that talk to you or that you can hang out with is a good thing and can make a world of difference.

Many participants had attended Guide Dog camps involving an overnight stay at Melbourne University and learning how to navigate the city. Participants commented, “you go around the city ... it was actually pretty fun and there were a lot of good people there” and “camps are pretty awesome because students are, well you are with people that understand you, both teachers and students.” Participants enjoyed the interaction with other students with vision impairment, which gave an ease to interactions, and common ground when discussing things. Participants mentioned their interactions with a sense of relief, as here were people

who understood. Statements included “I really enjoyed having the contact with other vision impaired people” and “the kids [vision impaired] understand and know what I am going through and I can relate to them. If I say I had trouble on this train line they say, oh yes I had trouble on that too ... conversation flows.”

Various assistive technologies were introduced with limited success. VTs would suggest technologies to try resulting in participants feeling “like a guinea pig,” as rarely were participants given the instruction necessary to become competent users of the technology. Several participants used a Mimio, technology used to transfer an image of what was on the board onto their computer, but found it unreliable as teachers didn’t understand its function, the units slipped down the board and pens dried out. The most innovative technology used was an iPad, and this was at a student’s own initiative. Participants rarely compiled notes from images taken because of the excessive time it would take. As explained by a student, “I don’t transcribe the notes a great deal [it takes too much] time!” adding that not transcribing had probably had a negative effect on his learning. Participants also commonly found using assistive technology difficult, with accessibility hindered because school systems were incompatible with their software. Online learning environments were also problematic. Work in PDF format was difficult to access when using screen-readers. Comments such as “technology has not been easy” were common.

Although all schools provide career guidance, participants with vision impairment did not have any individualized programs or training apropos of their specific needs. Work experience is a core curriculum expectation for all students, but not all participants with vision impairment participated, including the participant receiving the most VT support. One participant organized his work experience with Guide Dogs, going to a school with an instructor to work with students on mobility. He found it interesting and stated, “Well I am thinking of doing orientation and mobility because [the guide dog mentor] is vision impaired too.” His very limited experience in careers and options is evident. VTs did not appear to have had any input with career guidance staff and participants did not recall any support.

Participants all felt some of their independent living skills were quite well developed, such as personal hygiene and food preparation. As they were senior students this was perhaps to be expected. All participants could make a cup of tea and most enjoyed cooking. As one participant laughingly commented “at home I do a fair amount of cooking ... I don’t have any concerns – I am not going to burn the house down or take off a finger or something!” Participants seemed aware of costs involved in having a mobile phone, and money

management issues. VT input appeared minimal for living skills at this stage, with parent interaction of more significance.

Recreation and leisure skills were affected by participants' exclusion from participating in many sporting activities. Where changes could have been made allowing for the participation of students with vision impairment, none were made. Schools did not incorporate swish, a version of table tennis accessible to students with vision impairment, when offering table tennis as a sporting activity to sighted students. VTs showed little attention to developing student skills in these areas where social participation with peers could have developed.

With respect to self-determination, all participants in this study could clearly articulate their specific vision disability and the resources and assistance they would need to access the curriculum if they were to be on a par with other students. However, participants did not want to be a bother, as exemplified by one participant who stated, "I could be more proactive, but I hate sort of being - I don't want to be an inconvenience." Participants required more assistance and training from VTs to be self-advocates, to overcome negative attitudes and practices resulting in their exclusion from subjects such as science and sport. Most participants were in their final year of schooling, and one reflected that "to be successful, persevere. Have a go at everything, and if things go wrong laugh it off and plough on. Keep calm and carry on." It was also stated that you can whine about the cards you are dealt, or "just work with it."

Sensory efficiency skills incorporating making the most of residual sight and using other senses to maximize educational and environmental access, became a natural part of these senior participants' experiences. Participants spoke of their well-developed hearing and listening skills, and use of smell and touch in kitchen situations.

## **Discussion**

In this study, the provision of the ECC by VTs to secondary school participants with vision impairment attending state and independent mainstream schools in Victoria was found to be inadequate in most areas, with the time VTs spent at schools insufficient for the task. Provision of the ECC and the impact on schooling was considered in the light of participant revelations about their education. Notwithstanding the limited support most participants had from their VT responsible for the ECC, some aspects were realized, particularly in orientation and mobility. Other areas including access to the curriculum, assistive technology skills,

social skills, recreational skills, career counselling, and self-determination remain concerning, with participants revealing many hardships caused by ineffective curriculum delivery which was not challenged by VTs or relieved by independence skills (Douglas & Hewett, 2014). Past research has shown that time-poor VTs spend most of their time on academic and compensatory skills (Agran et al., 2007; Lohmeier et al., 2009; Wolffe et al., 2002). Compensatory skills effective for accessing the curriculum presented in the classroom remained underdeveloped (Brown, Packer & Passmore, 2013; Reed & Curtis, 2011). Participants were restricted access to science classes, with findings supported by research contending this reflects the stereotypical views by teachers and aides of what students with vision impairment could or could not do (Byrnes & Rickards, 2011; Moon, Todd, Morton & Ivey, 2011; Rule, Stefanich, Boody & Peiffer, 2011).

VTs appeared unable to develop the adequate and effective use of assistive technology in the classroom to ensure equality of curriculum access, with research asserting that assistive technology may be underutilized because of inadequate knowledge by teachers and aides to provide effective instruction (Chambers, 2011; Griffin-Shirley, Parker, Smith & Zhou, 2011). Quality instruction in assistive technology has been related to a student's future social activity, continuation to postsecondary education, and paid employment (Wolffe & Kelly, 2011). Participants were not kept abreast of current technology and had little recourse to information from their schools.

All participants experienced isolation which suggests that VTs were also unable to satisfactorily deliver the ECC social component. Thus, the participants' education was not inclusive, as accepting and belonging are regarded as central tenets of effective inclusion (Jones, 2014; Jones, White, Fauske & Carr, 2011; Opie & Southcott, 2015). The negative effects of social isolation for students with vision impairment are well documented (Khadka, Ryan, Margrain, Woodhouse & Davies, 2012).

Although the benefits of participation in physical education programs were noted as an important area of the ECC, participants in this study were often excluded, reflecting overprotective attitudes or lack of skills in adapting programs to meet the needs of all students (Haegele & Porretta, 2015; Lieberman et al., 2014). Ongoing concerns for the underemployment of people with vision impairment (Ravenscroft, 2013; Vision Australia, 2015) highlight the need for greater focus on career education as well as recreation and leisure skills, as it has been recognized that the latter are of particular importance in employment (Roth & Columna, 2011). Ravenscroft (2016) questions the balance of education for students with vision impairment, who may be gaining high academic results but because

of the lack of attention paid to areas of independent living and social skills, fail to find employment. Essential collaboration between the VTs and others including HoSE and teachers was minimal in this study, attributed to insufficient employment of VTs, lack of time, and the expectation to oversee or implement all areas of the ECC (Brown & Beamish, 2012).

Concerns expressed by participants in this study are similar to those raised in the Commonwealth of Australia (2015) Review of the Standards, in which Vision Australia drew attention to the lack of VTs available, noting the amount and quality of the support was often dependent on location and allocation of funding. They noted curriculum materials were not being made available to students with vision impairment on the same basis as other students and in the students chosen format, with often unacceptably long delays in having the material provided; accommodations such as accessible software solutions, extra time for exams and having those exams in accessible format were not provided; access and use of adaptive technology was hindered by funding, and lack of proper training; software students needed to use was often not accessible, or incompatible with school systems, and meaningful social participation was hindered by the exclusion from sports activities and clubs within schools (Vision Australia, 2015). Lack of accommodations was seen as a reflection of teachers' interest, as measures such as extra time for exams and placing a student's desk where there is no glare only require "the willingness of the educator and the institution concerned to embrace the individual needs of students to enable a student to function at his or her full potential" (Blind Citizens Australia, 2015).

The impact of poor delivery of the ECC on student well-being is highlighted by the many heartfelt comments made by the participants regarding their sense of isolation, of not belonging, and of feeling a nuisance when asking for work to be given in accessible formats. It was apparent that participants were unable to be strong advocates for themselves in atmospheres where teachers were regarded as lacking understanding and were too busy to produce work in appropriate formats or email, where participants were expected to "fit in" and where participants felt they would look weak if they asked for teacher assistance. VT services were inadequate to promote inclusive practices. Douglas and Hewett (2014) consider the ECC as part of a balanced solution, with its skills-based approach to independence to be balanced with an individualised approach to preparing young people for life after school. McLinden, Douglas, Cobb, Hewett, and Ravenscroft (2016) note the importance of the specialist teachers' role in ensuring that the student's environment is "structured to promote learning throughout their education ('access to learning')" and in supporting the student to

“learn distinctive skills in order to afford more independent learning (‘learning to access’)” (p. 179).

## **Recommendations**

From the revelations of the experiences of participants in this study, recommendations are proposed which may have made their educational experiences more inclusive. How components of the ECC may be delivered when and where needed, given the time constraints of the school day and the availability of VTs, remains an ongoing debate (Grimmett, Pogrud & Griffen-Shirley, 2011; Lohmeier et al., 2009; Wolffe et al., 2002). As VTs appear unable to deliver the essential elements of the ECC to participants in the limited time they have available, ascertaining who can accept responsibility for their implementation remains to be resolved. There appears a shortage of VTs available (Beamish & Brown, 2012) and no indication of a change. Ideally, this situation would be further investigated and rectified, but working within these constraints, it is asserted that if all teachers were to become more aware of the ECC and understood the requirements, participants in this study may have had a better chance of more aspects being covered. The lack of classroom teacher understanding of vision impairment was a common statement by all participants in this study. When discussing the ECC with HoES, it was felt that ignorance may have resulted in difficulties being exacerbated for participants. HoES felt that they could have been more proactive in meeting the needs of the participants and provided the information to teachers had they known of the difficulties specific to vision impairment. While it is often advocated that the ECC be delivered by VTs (McLinden et al., 2016; Ravenscroft, 2013; Sapp & Hatlen, 2010), provision of the ECC by teachers’ other than VTs has been shown to be possible. Research shows physical education programs delivered meaningful opportunities in their classes which addressed recreation as well as all the other areas, including social skills, orientation and mobility, self-determination, technology, activities of daily living, and independence (Lieberman et al., 2014). For this to occur, it is seen as imperative for the teacher to work in collaboration with VTs and also the school, parents, orientation and mobility instructors, and their students with vision impairment. It is recommended that more research is carried out in this area.

With the scarcity of VTs, their high cost and limited hours available to work with participants and school personnel, education in the ECC for secondary classroom teachers who have a student with vision impairment in their class seems a necessary and logical step

in helping to provide for these students' needs. Victorian teachers, as part of their compulsory 20 hours professional development for registration, are now "required to build capacity to teach learners with disability" (Victorian Institute of Teachers, 2016). Many options are available for teachers, with four specific courses of professional learning offered. These courses focus on understanding, assessment and classroom support of students with autism spectrum disorders; speech, language and communication needs; dyslexia and significant difficulties in reading; and understanding hearing loss; but there is nothing available on understanding vision impairment. The addition of a course on vision impairment could be a way to ensure any teacher of a student with vision impairment better understands vision impairment and their responsibility in providing an equitable education. Although competencies are listed for VTs (Ravenscroft, 2015), abilities in areas published by the National College for Teaching and Leadership (2015), Annex A, could be a starting point for production of a unit to support teachers. Teachers need to be well versed in the knowledge and skills required by students with vision impairment due to their unique disability-specific needs. Teachers will need to add to their knowledge in all ECC areas to address issues such as deficits in social skills, including how to assess the student's social skills and provide targeted instruction for the areas of deficit. Issues of integrating the ECC into their student's daily schedules, finding time for direct instruction as needed and ensuring meaningful discussion with the student regarding their support should be addressed, understanding that individual differences in vision impairment occur as in all populations, and educational programs need to be tailored accordingly. Teachers and students would still require input from VTs but would be better equipped to manage with the limited VT visits available.

### **Conclusion and implication for practice.**

Although the limitations of a small sample size are acknowledged, such rigorous single-subject research may disconfirm expectations, reveal the unexpected and offer an evidence base for educational practice (Horner, Carr, Halle, McGee, Odom & Wolery, 2005; Smith, Flowers & Larkin, 2009). This small phenomenological study giving voice to students about their schooling experiences exposed a lack of classroom teacher understanding of vision impairment, the limited extent of ECC delivery, and consequently the need to examine further delivery options due to restricted access to VTs. It is apparent that classroom teachers may need to take on more responsibility from VTs, given that more VTs are unlikely to be forthcoming. Recommendations include the provision of a module of learning, available for

teachers who have a student with a vision impairment in their class, which could be added to those currently available as part of the professional development required for teacher registration. Teachers, collaborating with VTs, orientation and mobility specialists, teachers, parents and the student, may then be better placed to incorporate skills and competencies of the ECC into their classroom practice to ensure the needs of students with vision impairment are met and their education more inclusive. Further research into the need for a training module, its content and its effectiveness in promoting the implementation of the ECC, and more inclusive educational experiences for students with vision impairment is recommended.

### **Limitations**

This was a small study of senior students with vision impairment in attendance at a few city schools in Victoria, Australia. While it may have relevance to the support of other students with vision impairment in the pursuit of an inclusive education for them, no generalizations can be made. Further extensive research involving a greater number of participants in various schools, both city and rural, private and state, is required.

## **References**

- Agran, M., Blankenship, K. & Hong, S. (2007). Promoting the self-determination of students with visual impairments: Reducing the gap between knowledge and practice. *Journal of Visual Impairment and Blindness*, 101, 452-464.
- American Federation for the Blind. (2017). *The expanded core curriculum for blind and visually impaired children and youths*. Retrieved from <http://www.afb.org/info/programs-and-services/professional-development/teachers/expanded-core-curriculum/the-expanded-core-curriculum/12345>
- Biggerstaff, D. L. & Thompson, A. R. (2008). *Qualitative Research in Psychology* 5, 173-183.
- Blind Citizens Australia. (2015). *Submission to the 2015 review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/system/files/doc/other/blindcitizensaustralia.pdf>

- Blind Citizens Australia. (2010). *Submission to the inquiry into the provision of education to students with a disability or special needs*. Retrieved from <https://www.parliament.nsw.gov.au/committees/DBAssets/InquirySubmission/Summary/45215/Submission%20552.pdf>
- Brown, C. M., Packer, T. L. & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education, 46*(4), 223-232.
- Byrne, L. J. & Rickards, F. W. (2011). Listening to the voices of students with disabilities: Can such voices inform practice? *Australasian Journal of Special Education, 35*(1), 25-34.
- Chambers, D. J. (2011). *Assistive technology: Effects of training on education assistants' perceptions of themselves as users and facilitators of assistive technology and consequent transfer of skills to the classroom environment* (Doctoral dissertation). University of Notre Dame Australia. Retrieved from <http://researchonline.nd.edu.au/theses/62>
- Douglas, G. & Hewett, R. (2014). Views of independence and readiness for employment amongst young people with visual impairments in the UK. *The Australian Journal of Rehabilitation Counselling, 20*(2), 81–99
- Finlay, L. (2008). A dance between the reduction and reflexivity: explicating the “phenomenological psychological attitude.” *Journal of Phenomenological Psychology, 39*(1), 1-32.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of “seeing afresh”. *Journal of Humanistic Psychology, 53*(2) 172-201.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J. & Sharma, U. (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Braddon, ACT: Australian Research Alliance for Children and Youth. Retrieved from <https://www.aracy.org.au/publications-resources/area?command=record&id=186>
- Griffin-Shirley, N., Parker, A. T., Smith, D. W. & Zhou, L. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment and Blindness, 105*, 533-539.

- Guerette, A. R., Lewis, S. & Mattingly, C. (2011). Students with low vision describe their visual impairments and visual functioning. *Journal of Visual Impairment and Blindness*, 105(5), 287-298.
- Guide Dogs Victoria. (2016). *Policy and advocacy priorities*. Retrieved from <https://www.guidedogsvictoria.com.au/>
- Grimmett, E. S., Poggrund, R. & Griffin-Shirley, N. (2011). A national study of parents' perspectives on dual-certified vision professionals. *Journal of Visual Impairment and Blindness* 105(4) 211-221
- Haegele, J. A. & Porretta, D. (2015). Physical activity and school-age individuals with visual impairments: A literature review. *Adapted Physical Activity Quarterly*, 32(1), 68-82.
- Hatlen, P. (1996). The core curriculum for blind and visually impaired students, including those with additional disabilities. *RE: view*, 28, 25-32.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S. & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71(2), 165-179.
- Insight Education Centre for the Blind and Vision Impaired. (2015). *2015 Review of the standards for education 2005 submission* Retrieved from <https://docs.education.gov.au/node/40446>
- Jacobson, W. H. (2012). *The art and science of teaching orientation and mobility to persons with visual impairments* (2<sup>nd</sup> Ed.). New York: American Foundation for the Blind.
- Jones, P., White, J. M., Fauske, J. R. & Carr, J. F. (2011). *Leading for Inclusion*. New York, NY: Teachers College Press.
- Jones, P. (2013). Whose insider perspectives count and why should we consider them? In P. Jones (Ed.), *Bringing insider perspectives into inclusive teacher learning: Potentials and challenges for educational professionals*, (pp. 1-8). Hoboken, NJ: Taylor and Francis
- Kelly, S. M. (2015). Role of Vision Specialists in Special Services. In F. E. Obiakor & J. P. Bakken (Eds.), *Interdisciplinary connections to special education: Key related professionals involved (Advances in Special Education, Volume 30B)*, (pp. 197-211). Emerald Group Publishing Limited. Retrieved from <http://www.emeraldinsight.com.ezproxy.lib.monash.edu.au/doi/full/10.1108/S0270-40132015000030B017>

- Kumar, D. D., Ramasamy, R. & Stefanich, G. P. (2001). Science for students with visual impairments: Teaching suggestions and policy implications for secondary educators. *Electronic Journal of Science Education* 5(3). Retrieved from <http://ejse.southwestern.edu/article/view/7658/5425>
- Moon, N. W., Todd, R. L., Morton, D. L. & Ivey, E. (2011). *Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM): Findings from research and practice for middle grades through university education*. Atlanta: Centre for Assistive Technology, Georgia Institute of Technology. Retrieved from <http://www.catea.gatech.edu/scitrain/accommodating.pdf>
- Larkin, M., Watts, S. & Clifton, E. (2006). Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology*, 3(2), 102-120
- Lieberman, L. J., Haegele, J. A., Columna, L. & Conroy, P. (2014). How students with visual impairments can learn components of the expanded core curriculum through physical education. *Journal of Visual Impairment and Blindness*, 108(3), 239-248
- Lohmeier, K. L. (2009.) Aligning state standards and the expanded core curriculum: Balancing the impact of the no child left behind act. *Journal of Visual Impairment and Blindness*, 103(1), 44-47.
- Lohmeier, K., Blankenship, K. & Hatlen, P. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment and Blindness*, 103(2), 103-112.
- McLinden, M., Douglas, G., Cobb, R., Hewett, R. & Ravenscroft, J (2016). Access to learning' and 'learning to access': Analysing the distinctive role of specialist teachers of children and young people with vision impairments in facilitating curriculum access through an ecological systems theory. *The British Journal of Visual Impairment*, 34(2), 177-195
- Media Access Australia (2013). *Inclusion Through Technology. Vision Education Scoping Report*. Retrieved from <https://mediaaccess.org.au/education/low-vision-blindness/vision-education-scoping-report>
- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *The International Journal on School Disaffection*, 11(2), 67-81.
- Ravenscroft, J. (2013). High attainment low employment: The how and why educational professionals are failing children with visual impairment *The International Journal of Learning*, 18, 135-144.

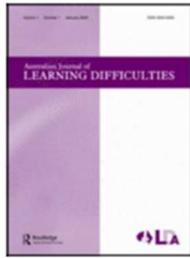
- Ravenscroft, J. (2016). Visual impairment and mainstream education: Beyond mere awareness raising. In L. Peer & G. Reid (Eds.), *Special educational needs: A guide for inclusive practice*, (pp. 232-250). London, UK: SAGE.
- Reed, M. & Curtis, K. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment and Blindness*, *105*, 548-559.
- Roth, K. & Columna, L. (2011). Collaborative strategies during transition for students with disabilities. *Journal of Physical Education, Recreation, and Dance*, *81*(5), 50-55.
- Rule, A. C., Stefanich, G. P., Boody, R. M. & Peiffer, B. (2011). Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, *33*(6), 865-887.
- Sapp, W. & Hatlen, P. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment and Blindness*, *104*(6), 338-346.
- Smith, J. A. (2017). Interpretative phenomenological analysis: Getting at lived experience. *The Journal of Positive Psychology*, *12*(3), 303-304.
- Smith, J., Flowers, P. & Larkin, M. (2009). *Interpretative phenomenological analysis : Theory, method and research*. Los Angeles, CA: SAGE.
- Smith, J. A., Jarman, M. & Osborne, M. (1999). Doing Interpretative Phenomenological Analysis. In M. Murray & K. Chamberlain (Eds.), *Qualitative health psychology: Theories and methods*. London, UK: SAGE.
- Southcott, J. & Joseph, D. (2015). Singing in La Voce Della Luna Italian women's choir in Melbourne, Australia. *International Journal of Music Education*, *33*(1), 91-102.
- Statewide Vision Resource Centre (SVRC). (2016). *Expanded core curriculum for students with vision impairments*. Retrieved from <http://svrc.vic.edu.au/curriculum/expanded/>
- United Nations (CRPD). (2006). *Convention on the rights of persons with disabilities*. Retrieved from <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-24-education.html>
- Victorian Institute of Teachers. (2016). *Special needs plan*. Retrieved from <http://www.vit.vic.edu.au/professional-responsibilities/special-needs-plan>

- Victoria State Government. (2012). *Student support services guidelines*. Retrieved from <http://www.education.vic.gov.au/Documents/school/principals/spag/safety/studsuppguidelines.pdf>
- Vision Australia. (2012) *Supporting children who are blind or have low vision*. Retrieved from <https://www.visionaustralia.org/>
- Vision Australia. (2015) *Submission to the 2015 review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/node/40531>
- Wolffe, K.& Kelly, S. M. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment and Blindness* 105(6), 340-349.
- Wolffe, K. E., Sacks, S. Z., Corn, A. L., Erin, J. N., Huebner, K. M. & Lewis, S. (2002). Teachers of students with visual impairments: What are they teaching? *Journal of Visual Impairment and Blindness*, 96, 293-304.

## **Chapter 12**

### **The experiences of Australian secondary school students with vision impairment using technology in inclusive settings: An ecological perspective.**

In this article Bronfenbrenner's bio-ecological model is applied as a framework to acknowledge the individual as a central and active participant in their environment, one who influences and is influenced by bi-directional relationships and factors within the school domain (micro-system) and the education system domain (macrosystem). The conceptual application of this model was applied through using the domains of the student, school and the education system as the critical layers of influence pertaining to technology in education. Many barriers and few enablers for the effective use of technology in the classroom were revealed. Findings exposed concerns including access to technology experts, experiencing negative attitudes and impeding practices by teachers and aides, and restrictive access to technology, all which acted as barriers to student's inclusive education. The need for the expertise, and professional development for teachers and aides to upskill and keep abreast of rapidly developing and changing technology was indicated.



## **The experiences of an Australian secondary school student with vision impairment using technology in inclusive settings: An ecological perspective.**

### **Abstract**

This paper reflects on the educational experiences of a senior secondary school student with vision impairment attending an inclusive mainstream school. Using qualitative phenomenological analysis, his lived experiences of schooling were investigated. Technology is used by students with vision impairment to create a level playing field with peers in the access of the curriculum and general education. Bronfenbrenner's ecological systems model was used to conceptualize technological factors influential in the student's education. Of particular focus in this study were the interacting technology components within and between the micro-, meso-, exo-, macro- and chrono- systems and the student at the center of the model. Barriers and enablers to the student's inclusive education were highlighted in relation to technology.

### **Key Words**

vision impairment; disability; technology; qualitative phenomenological analysis; Bronfenbrenner; secondary school

# **The experiences of Australian secondary school students with vision impairment using technology in inclusive settings: An ecological perspective.**

## **Introduction**

Globally there has been a move towards inclusive education for student populations, but this may be resulting in exclusion for students within the schools themselves (Anderson, Boyle & Deppeler, 2014; Slee, 2011). While acknowledging that the question is no longer ‘should’ a quality education be provided to all, but ‘how’ this change reform can be enacted (Jackson, 2008), we must listen to the voices of the students themselves, so they can be part of the solution (Messiou, 2012; Moss, 2013; Slee, 2011). The aim of this study was to investigate the educational experience for a student with vision impairment attending a mainstream secondary school, combining the results of a single-case IPA research with Bronfenbrenner’s model of human development. The re-conception of Bronfenbrenner’s theory as “the ecology of inclusive education” gives an operational, theoretical framework for researchers which supports understanding of the factors that influence inclusive education, together with the relationships and connections they have with one another and the environment (Anderson et al., 2014). It allows flexibility to focus on single or a combination of aspects of inclusive education (Anderson et al., 2014, p. 31). One aspect of the environment found to be critical for a student with vision impairment in accessing an inclusive education was revealed by the participant to be technology.

Inclusive education may be defined from a whole-school approach, as being about how effective schools are “at making practical changes so that all children, regardless of their background or ability, can succeed” UNICEF (2010, p. 31). Inclusive education is an approach that seeks to transform education systems as a response to the diversity of learners (UNESCO, 2003). The International Classification of Function, Disability and Health (ICF) (WHO and World Bank, 2011, p. 5) argues that environmental factors may act as “facilitators or barriers” to participation, with factors including physical elements, supports and relationships, attitudes and services, and overarching systems and policies. An individual’s capacity and actual performance is influenced by all environmental factors. For a student with vision impairment the environment could include teachers, aides, peers, parents, technology, classroom, school policies and their application, framed by global policies and culture. Despite the perceived importance of environmental factors, little is known about the adequacy of the environment for students with vision impairment in mainstream schools, as

the relative importance of the environmental factors in the inclusion of young students with vision impairment has rarely been examined (Brown, Packer & Passmore 2013).

Attendance at mainstream schools is the norm for the majority of students with vision impairment in Australia, and a global trend in Western countries (Foreman, 2011; Brown et al., 2013). In 2013, the estimate for the number of students with vision impairment in Australia was 4,000 (Media Access Australia, 2013). In Victoria (the locus of this research), a student with vision impairment may be defined as a person with measurable vision but who has difficulty or is unable to accomplish visual tasks, even with prescribed corrective lenses and includes those students denoted as legally blind, having less than 6/60 visual acuity or less than 10-degree visual field in their better eye (Vision Australia, 2017). There exists a wealth of information highlighting the significant impact that vision impairment can have on all domains of development, cognitive, linguistic and social (Dale & Sonksen, 2002; Brown et al., 2013; McLinden & Douglas, 2013). In the classroom, most learning occurs through vision, with materials presented in a variety of visual formats including diagrams, charts, videos, demonstrations and print materials (Khadka et al., 2012). Full participation is affected by the need of students with vision impairment to access print materials using alternative methods (Bardin & Lewis, 2008; Douglas, McLinden, Farrell, Ware, McCall & Pavey 2011). It is well documented that students with vision impairment may require, and should receive, adjustments catering for their vision-specific needs, to ensure their equitable and quality inclusive education (Commonwealth of Australia, 2016). The Expanded Core Curriculum (ECC) (Hatlen, 1996), covers this specific body of knowledge and skills which includes assistive technology/technology as one of the key areas of importance for students with vision impairment (Ravenscroft, 2016; Sapp & Hatlen, 2010; Wolffe & Kelly, 2011).

### **Technology in the students' world**

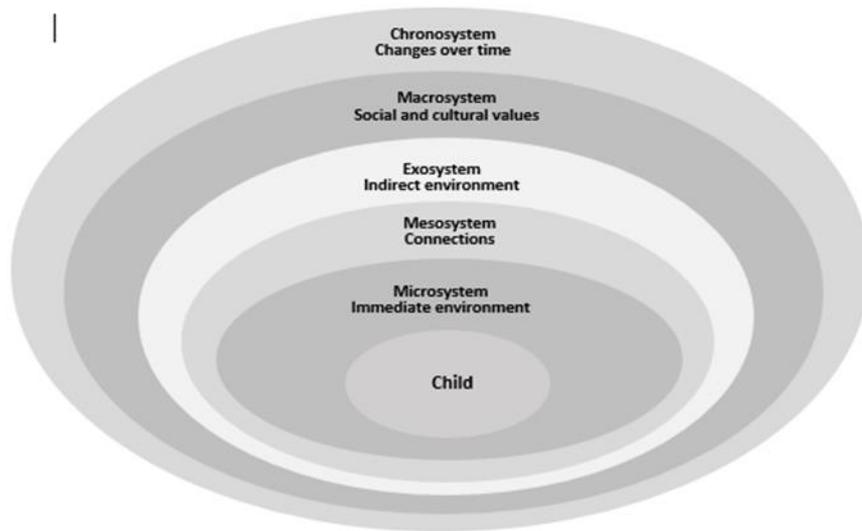
While the term 'technology' is often used as a generic term for all the technologies people develop and use, in this paper the term refers more specifically to, first, information and communication technologies (ICT) and, second, assistive technologies. ICT is a specific sub-group of current and emerging technologies that broadly encompass information and communication devices and the software that enables them to function (MCEETYA, 2006). Such devices usually have a central processor, and input and output components. Software supports the interaction between, and the operation of, these devices. Second, assistive technology enhances the ability of students with vision impairments to access and engage

with activities, processes and materials that would otherwise be inaccessible to them. For example, screen reader software provides access to computer functionality via synthetic speech or enlarged onscreen text. Without a screen reader, a student with vision impairment may not be able to access or participate in any activities that require computer use (UNICEF, 2015).

In an era of technology, where over 80 per cent of classroom learning is visual (Hyerle, 2008; Vision Australia, 2015), it is to be expected that the disadvantages to students with vision impairment could be minimized were there successful implementation and use of technology. The ICT policy of the Victorian Government asserts that all young Australians should have the opportunity to learn and develop in ICT across curriculum areas, with “school leaders having the responsibility” to prepare students for the demands of an ever-changing world by facilitating learning in a technology-rich environment (State Government of Victoria, DET, 2015b, p. 1). Teaching and learning “transformation through digital education” is an expectation of such a process (Digital Education Advisory Group, 2013 p. 5).

### **Re-conception of Bronfenbrenner’s ecological theories.**

To study inclusive education consideration must be given to relationships extending from the individual within their schooling environment to the national and global contexts within which it is situated, as schools operate within the wider state, national, global and historic contexts. (Anderson et al., 2014). Bronfenbrenner’s ecological systems perspective was a move away from the linear causation medical model drawn from natural sciences where cause and effect are directly and simplistically linked. His model envisaged a multi-layered circularity, where an action in one part of the system influences another part of the system in a complex, multidirectional way (Hay, 2010). Providing the imagery of a set of nested Russian dolls, Bronfenbrenner claimed that various immediate and more distant forces affect an individual’s development. These may be viewed as five systems that focus on intimate, interfacing, community, cultural and time perspectives. Bronfenbrenner termed these systems within his overall model the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Bronfenbrenner, 1976; Singal, 2006) (See Figure 1).



**Figure 1.** Bronfenbrenner's bioecological systems theory model

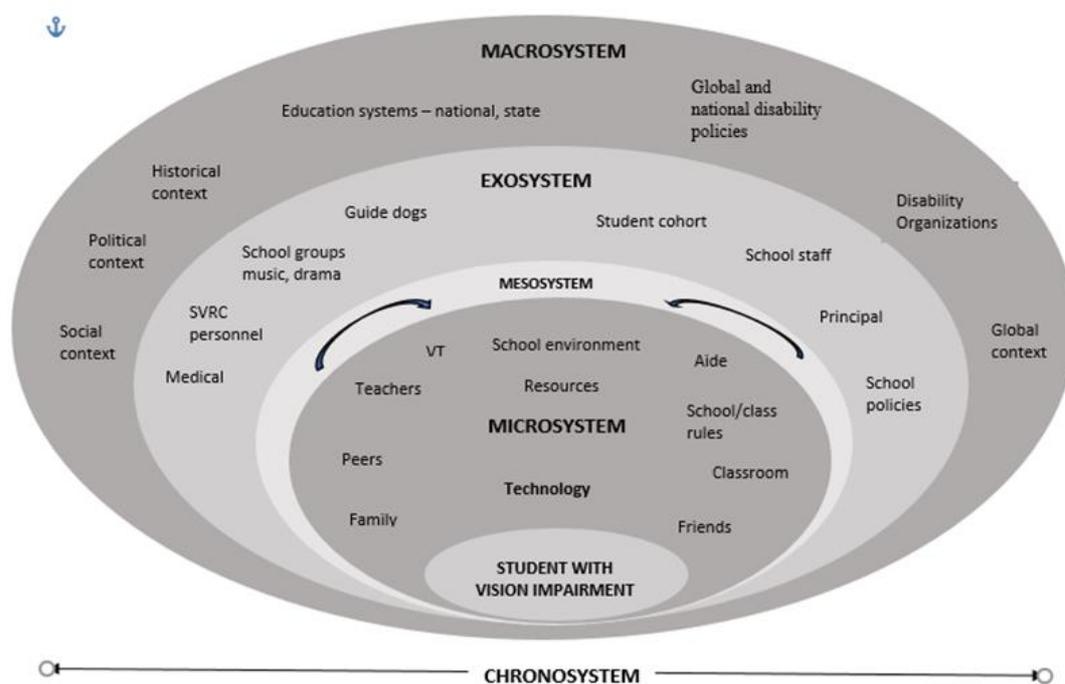
A student's development must take into account the relationships they have with those closest to them including their family, teachers and peers and their immediate school environment, shaped by the combination of the student's individual qualities of personality, behaviour, unique traits, attitude, interpersonal skills, and communication abilities. In combination, these relationships and qualities identify a distinct person. Bronfenbrenner's framework acknowledges the unique characteristics of the students in the centre of the circles (Bronfenbrenner & Morris, 2007) recognizing the dynamic, bidirectional interrelations of a myriad of environmental influences from the systems surrounding the student. As Bronfenbrenner stated (1994, p. 5) the bioecological model implies

That many human beings may possess genetic potentials for development significantly beyond those that they are presently manifesting, and that such unrealized potentials might be actualized through social policies and programs that enhance exposure to proximal processes in environmental settings providing the stability and resources that enable such processes to be maximally effective.

In this study, Bronfenbrenner's bioecological model was used to frame how the microsystem of technology impacted on inclusive education for a student with vision impairment. Thus, the central figure for this study the participant with vision impairment. Immediately surrounding this student are functioning microsystems that incorporate all the factors that exist within the environments in which he directly experiences schooling, including technology, peers, teachers, aides, special education teachers, visiting teachers, parents,

classroom and school environments. The linkages and processes taking place between these microsystems comprise the mesosystem. These bidirectional connections are continuously occurring, changing and evolving and are dynamic influences for the student, some or all of which the student directly or indirectly influences himself. The surrounding exosystem consists of the people or factors perhaps not directly involved with the student but potentially influential, such as the Principal, Head of Curriculum, school board, school policies, professional development school culture and community.

The macrosystem refers to the layer comprising political, social, economic and cultural patterns that have a cascading influence through the various interactions with all other system levels. In this context, the policy of government, the social and political climate, and the prevailing economic issues all potentially impact on education as a system. The different layers of the model are all interactive and highly dynamic with interactions between all systems adding complexity to the process. The final environmental system, the chronosystem, introduces the element of time (See Figure 2).



**Figure 2.** An illustration of some components operating within the bioecological systems of Bronfenbrenner’s model for a student with vision impairment.

This current study occurs in a particular era in time, as well as having a span of time linked to the retrospective consideration of the years of educational experience for the participant. The socio-historical events and changes in belief about disability over the life time of this

participant's time at school impact upon the macrosystem, in producing cultural interpretations and understandings that are unique to particular periods. In the present, in Victoria, inclusive education is advocated. For a student with vision impairment in Victoria, the period of schooling is generally from 5 to 18 years of age, with the first seven years designated primary education and the latter six secondary education. Whilst this study has a focus on the secondary educational experiences for the participant, the study also recounts the student's past and present understandings across his age range for schooling: it thus takes a longitudinal perspective in terms of Bronfenbrenner's chronosystem perspective.

For students with vision impairment, the need for assistive technology and technology in general to allow equity in access of the curriculum is well documented, and the focus for this study. The question that drives this study is: How can Bronfenbrenner's theory of bioecological human development assist in understanding the impact of technology on inclusive schooling for a student with vision impairment?

## **Methodology**

This was a qualitative study. It incorporated an in-depth analysis of the experiences of schooling for a student with vision impairment. With ethical approval from the university for this research, a call for participants to opt into the study was placed in an online Guide Dogs Victoria newsletter. Nick (a pseudonym used for anonymity) opted into the study and was interviewed for approximately an hour on each of three occasions. Nick was 16 years of age and in Year 10. He is legally blind, and qualifies for some Federal and State funding. His vision impairment, aniridia glaucoma (aniridia means no iris, glaucoma is pressure building up in the eye) and nystagmus (rapid involuntary eye movements) give him vision less than 6/60. This qualitative phenomenological case study sought understanding of how Nick perceived his experiences of secondary schooling. This was a process of engaging in a double hermeneutic, whereby the researcher was trying to make sense of the participant trying to make sense of what was happening to him (Smith, 2008; Sohn, Thomas, Greenberg & Pollio, 2017). This research was idiographic in its commitment to the detailed examination of the particular case, with a desire to know in detail what the experience was like for the participant (Smith, Flowers & Larkin, 2009). The semi-structured interviews were audio-recorded and transcribed verbatim before being subjected to analysis. The emphasis was on listening to and understanding the various meanings Nick had constructed of his inclusive

education. In this paper, the focus was placed on how Nick's experiences were related to technology.

The multi-layered approach of the Bronfenbrenner model calls for exploration at the government, school, classroom and individual levels. Data collection at the (macro) level involved reviewing global as well as Australian national and state policies on education and inclusion. Nick attended an academic private school, and after reading the explanatory statement, permission was granted by the deputy-head of the school for the researchers to interview staff. An hour-long interview with the Head of Educational Support and Nick's aide was undertaken at the school. Teachers interested in participating were asked for responses to probing questions relating to their experience of vision impairment, assistive technology, and confidence in providing an inclusive education. Two hour-long interviews of Nick's parents were conducted at their home. All interviews were audio recorded and transcribed. In reporting this process, the use of verbatim quotations is used in the text.

Ecological systems theory framework supports exploration of the technology microsystem *per se* and the experience of schooling from the perspective of the student with vision impairment. The influence of the technology microsystem on Nick's education at all levels of the ecological system was considered. Bronfenbrenner defined the mesosystem as "a system of microsystems" comprising the relationships between two or more settings (Bronfenbrenner, 1994, p. 40). The technology microsystem connects with other microsystems, has a bidirectional impact with Nick, and incorporates his interaction with both living (teachers, peers) and nonliving (hardware, software) elements of information and communication. For Nick, ICT (notebooks, tablet devices) and assistive technology (software, camera) were utilized in order to enable a more equitable access of information relative to his peers. Complex mesosystemic interactions between microsystems were apparent, such as between technology and Nick's peers, Visiting Teacher (VT) specialists and aide microsystems. Exosystem influences affect microsystems, including the technology microsystem, as exemplified by the school portal for parents. Macrosystem analysis allowed for the establishment of the cultural value of some uses of the Internet as a tool for learning, and social media communication. Technology use and applications were seen to change in and across Nick's years of schooling (the chronosystem). These interrelations are demonstrated more clearly by revelations from Nick's interviews.

## Results

### School revelations

Nick recalled that when he was at primary school,

I didn't have any technology to use to get notes from the board. At that point, all I had technology wise was a computer. And that was not the best computer in the world I'll say that... It was just not working for me properly ... I could never get notes down from the board.

Nick realizes he is not able to access information to the same extent as his peers, even though some technology had been provided. This is restrictive of academic achievement. Technical expertise may have been beneficial at this stage (mesosystemic interaction of technology and specialist/teacher microsystems.) In Year 7, Nick's school introduced an iPad program, which he used in conjunction with a camera. He stated, "The camera is basically one you can just move around. You can put it right in front of the board, take a photo of it [board] and it will go straight onto the iPad". Nick found using a camera effective, and as all students were using iPads he "didn't really feel different." This is a macrosystem influence (school policy) on Nick's technology microsystem.

When Nick changed schools in Year 8, his new school was not an iPad school, and he again used a computer in the classroom. He noted,

Basically, it then used to take ages for the camera to work, because I didn't know how to use it properly with my computer. I didn't get any good training. Like I have never really had proper training with any of my equipment

With incompatibility issues and lack of instruction, Nick could not rely on the camera, so ceased to use it. This illustrates a mesosystemic interaction between technology/technology expert/teacher microsystems. Nick had used Zoomtext on his computer in primary school and Year 7, but on changing schools, experienced difficulties, stating "I always used Zoomtext [an integrated magnifying and screen reading program] ... But I couldn't use it for nearly two years when I changed schools because their systems were too new for the program." These mesosystemic interactions between technology microsystem and teacher microsystem reveals a lack of expertise in training Nick to use the technology, as well as a lack of understanding of the essential nature of functioning technology to allow Nick equal access to curriculum

information as presented to his peers. The lack of input from a technology specialist may be a function of school policy, exosystem components which can be seen to have an indirect effect of Nick.

Peer pressure influences were found to limit Nick's use of technology. He reported that he did not want to 'appear different' by using assistive technology such as a Mimio, a device which could relay what is written on the board to his computer as an image, as the equipment relied not only on being attached to the board prior to the teacher starting to write, but batteries being charged, and teachers using the special pens. Nick felt he was being a 'nuisance' expect the teacher to use the special pens. This meso-interaction between technology/teacher/peer microsystems impacted on the Nick, resulting in his rejection of the Mimio. The microsystem of classroom physical environment also had an impact on the technology microsystem, with power points for recharging computers often in inaccessible locations. Further access was discouraged as cords were perceived as 'a tripping hazard'. This demonstrates meso-interaction between technology and classroom environment. The interrelatedness of teacher, technology and class microsystems was illustrated when Nick was not taught to touch type, a skill which could have enabled him take notes if the notes were spoken as they were written on the board. As others in the class used computers, this would not have highlighted his difference.

Nick's teachers did not make use of the interactive whiteboards in the classrooms, which would have allowed Nick to download whatever was written on the board to his computer. The bidirectional influence and response to this issue between technology microsystem and school policy regarding the use of whiteboards in the exosystem was lacking. Nick felt he had no technology adequate for compiling notes on a basis equitable with his peers. The technology microsystem and VT microsystem interaction could have been more influential in sorting this out, but the limited input of VTs appears to be an issue. While teachers enabled the use of assistive technology they were unable to facilitate maximum benefits of its use. More linkages between system levels were apparent. The bidirectional meso-level interaction between the technology microsystem and microsystems of the classroom environment, peers (isolating effect and nuisance effect), and teachers (management of the classroom and their pedagogic strategies) in turn effect the individual student development at the core of the model, in this case, Nick. The result was Nick's abandonment of much of the assistive technology even though it had beneficial aspects, as he felt it was not only isolating, annoying for the teacher but was also drawing attention to his difference.

The teacher/aide microsystems were influential on the microsystem of technology. Nick noted that “There is no aide or teacher at my school that was trained for vision impairment...and I don’t have a VT.” When interviewed, Nick’s teachers all responded in the negative when asked if they felt adequately trained in using and supporting assistive technology. Nick reported that teachers and aides often restricted access as they did not have the necessary knowledge or skills to support the use of assistive technologies. Moreover, teachers and aides did not listen when he tried to explain how technologies could or could not be used. This may relate to attitudes of teachers/aides towards the abilities of those with disabilities and the expectation of their expertise as not being worth listening to. Aides kept coming up with “brilliant ideas” insisting that their suggestions be adopted without any technical expertise or input. Nick recounted having to explain to aides that their “insistence” he used “an enlarged cursor” was impossible given the magnifying technology programs he was using. Such experiences were seen as having a negative influence, were restricting, unhelpful and barriers to learning. Nick stated “so technology has not been easy. It has all been through my own efforts.” This points to a broader issue at the mesosystem level between technology and teachers and aides, as well as the exosystem level of school policies pertaining to how the impact of interventions are monitored, evaluated and reviewed for their effectiveness. With no teacher expertise in the use of technology products, no input from a VT, and no external technology support, Nick failed to capitalize on its use. There appeared no systematic process of review and evaluation which would, in other contexts of classroom activity, be regarded as a key point of pedagogy.

At the start of each school year Nick individually emailed his teachers a copy of his vision impairment statement asking for work that was to be written on the board and any worksheets to be sent online prior to each class, allowing him access to the information at the same time as his peers. Unfortunately, teachers rarely complied. Nick stated, “Some teachers do sometimes, but I just don’t think they remember.” This identifies the bidirectional effect between teacher/technology (microsystems) which did not result in the formulation of a standard policy (exosystem) for this undertaking, a perceived barrier for student equity. Nick often had to wait while an aide enlarged his worksheet, meaning he was unable to highlight important aspects of worksheets or make notes on them as his peers were doing when the teacher initially explained the work. Enlargements to A3, which has text smaller than Nick’s preferred size, were difficult to organize as after folding he couldn’t tell what worksheets they were. When a teacher used a PowerPoint for a class topic and forwarded Nick a copy he felt he had something close to the notes of his peers, which was helpful when studying for his

exam. This technology/teacher microsystem interaction was viewed as an enabler of inclusive practices, whereas having an enlarged A3 copy was viewed more as a barrier. At times, teachers were inflexible regarding handing in work, not allowing the use of technology to email work, contrary to inclusive policy which encourages practices enabling equity. Nick found teacher and aide attitudes regarding the use of technology inconsistent, at times inflexible and seemingly lacking an understanding of the learning effects and implications. Nick appreciated any work sent via email, stating “when I do get sent things they are just saved into one drive. Then I put them into each subject. And I can go through things. I am very organized with my files ... but getting material has not been easy – no. Definitely not.” Nick relies on his computer, stating, “I can write but sometimes even I can’t read it, and I don’t think I was ever really taught to handwrite properly.” He added, “I do as much as I can on the computer. I hand in everything that I can electronically. It is just better for the environment and easier.” Teachers were not always flexible, as Nick recalled, “My English teacher makes me print out work pretty much every time I have to hand something in ... she says she gets a whole lot of emails a day. She is not particularly helpful.” Nick’s exasperation with the situation is evident when he articulated his thoughts,

I ask the teachers to email but ... I got a bit mad because they still weren’t sending me the work electronically by the end of term. I need to be able to listen or see big print, not squint at small print. I asked them at the start of the year. Teachers just don’t understand that for me to actually see the work they need to send it before the class, and it is embarrassing to ask during class. I guess they really haven’t done such a good job.

Nick’s teachers would only allow his participation in science practicums if an aide was always present. As this was not possible to timetable, he was excluded from participating. The National Digital Learning Resources Network (2012) has a collection of over 15,000 digital learning resources including datasets, still and moving images, audio files and assessment items directly linked to the Australian Curriculum and accessible through the online digital curriculum portal Scootle, the national learning environment. There was no teacher guided access to Scootle resources for Nick, indicative of school policy (exosystem) not acting as an enabler to teacher/technology microsystem interaction which could have enhanced equity of access to the curriculum components. Nick found the exclusion from science difficult to understand, stating, “I don’t do science anymore ... because apparently, it

is all too dangerous ... and well, I cook at home.” Teacher/parent microsystem interaction could well have assisted teachers’ understanding in this area.

Parents are an influencing microsystem, often having to supply the technology, or be advocates and technicians for its use. Nick’s mother reflected that, “the lack of the text books in audio format I think is criminal.” She added that there are “so few texts in audio form from Statewide Vision Resource Center (SVRC).” She claimed that for Nick to use technology to “convert text to synthesized speech is so difficult. To find pages or a line – it’s ridiculous. A nightmare”. As Nick fatigues after 20 minutes of reading, being able to listen to things was seen as essential. Nick’s mother added, “We are doing a lot of YouTubing trying to find information on subject matter.” The mesosystemic interactions between the microsystems of technology, parents, as well as the exosystem component of SVRC appear to have been unable to resolve this issue.

From a different perspective, Nick uses Facebook as a link to potential friends. In this online environment, he finds a captive audience, where his vision impairment is not an issue, stating “people don’t move away.” He reveals, “I don’t have lunch with anybody. I have my bag with my computer with me so I usually sit on a bench and go on Facebook.” With no friendships at school, Nick found this technology satisfied a need for interaction. Nevertheless, this technology exposed him to be the target of social media bullying. His parents revealed that

A couple of students were circulating photos of Nick - it goes so quickly everywhere, yes so quickly everywhere. And they [school] shut down that chat group and the website straight away, which was a shame because it was there for a reason, but ... The school acted pretty quickly to shut it down.

It was not the only time technology was used in a negative way, as parents recalled the time when his classmates got him to bring in his birthday invitation fliers “that was just a nightmare. Before we knew it, they’d copied it and sent it to everyone in the school. We were like OOHH [sigh of exasperation]. It was pasted all around the school.”

Responsibility for factors within the exosystem that involves school wide practices are the domain of school leadership, relating to mesosystemic issues of teaching policy, resourcing and assumptions and expectations at various levels within the microsystems, with decisions made at this level directly influencing the many microsystems. All schools are expected to have a technology policy whereby “schools are aware of and use available

technology-based teaching and learning resources in a safe and responsible way, to improve student learning” (State Government of Victoria, DET, 2015c, p. 1). Nick’s school did not appear to have a clear policy regarding assistive technology, and were ill prepared linking his assistive technologies to the school network systems. As Nick explained, he could not use Zoomtext (a magnifying program) on his computer for more than a year when he changed schools, “because their systems were incompatible.” Only after considerable lobbying by his parents did the school finally resolve this issue. The school failed to engage with external technology experts to assist Nick in gaining maximum benefit from the technology available. As noted by Vision Australia “adaptive [assistive] technology is no different from any other technology in that it cannot simply be used without proper training and familiarization. Many [students with vision impairment] have been given complex equipment and left to figure out how to use it by themselves” (Vision Australia, 2015).

At the macrosystem level incorporating culture and policy, the right for students with vision impairment to be given access to technology is clear. The World Health Organization and the World Bank (2011) maintain that the school environment has a huge impact on the experience and extent of disability, declaring “Inaccessible environments create disability by creating barriers to participation and inclusion ... Examples of the possible negative impact of the environment include ... a blind person using a computer without screen-reading software” (The WHO and World Bank, 2011, p. 4). The macrosystem incorporates the socio-political factors, economic factors and cultural values operational at the time of this research that influence and shape the notion of inclusive education. All factors at the macro-level have a cascading influence across all other levels, and are in turn, affected by them. In an analysis of Australian Government reports (2013-2016), Macaulay, Deppeler and Agbenyega (2016) identified a number of factors across all levels of education in Australia, from the macro level of national policies through to the classroom and the individual students. They noted that the attitudes of a school’s leader, classroom teachers, and the local community strongly influenced a school’s culture of inclusion.

## **Discussion**

The experiences of schooling for students with vision impairment examined in the context of Bronfenbrenner’s bioecological framework can encapsulate experiences and the possible interactions of some of the multitude of influences and interconnections of the systems on particular students. Considering only the technology microsystem, this research demonstrated

some of the myriad cascading effects between systems that impact bidirectionally on Nick, the student at the center of the model. Demonstrably there are many barriers and some enablers in this study's data regarding effective use of technology. This research aligns with the findings of an extensive national survey that revealed that on average only 42 per cent of academically oriented high school students with vision impairments were using the "high-tech assistive technology that they needed to be using" (Kelly, 2011, p. 238), with research asserting that assistive technology may be underutilized because of inadequate knowledge by teachers and aides to provide effective instruction (Chambers, 2011; Griffin-Shirley, Parker, Smith & Zhou, 2011; Wolffe & Kelly, 2011). This is asserted to have a cumulative impact on student engagement with education as students with vision impairments "fall further behind their sighted peers every year that they continue not to use assistive technology to experience the benefits of electronic information sharing" (Kelly, 2009, p. 478). The use of assistive technology has also been linked with employability (McDonnall & Crudden, 2009; Ravencroft, 2013).

In Australia, there are ongoing concerns about the inadequate number of specially trained teachers of students with disabilities in mainstream schools, with current inclusive practices creating a demand for expertise for specialist knowledge that is currently not being met. This places unrealistic demands on teachers with little or no knowledge of the specific needs of these students (ACARA, 2012). While positive attitudes towards inclusion are acknowledged as a prerequisite to effective inclusion (Carroll, Forlin & Jobling, 2003; Sharma & Sokal, 2013), Nick experienced some positive but considerable negative attitudes and impeding practices by teachers and aides who possessed little awareness and understanding of the specific needs of a student with vision impairment in general and more specifically with technology.

Technology is only one theme considered, in an introductory way, at each ecological level in this study, with interrelated, sometimes circuitous influences noted. Interactions in one part of the network of interactions have feedback effects on other parts. A failure to manage a classroom properly makes using a technology less effective and this leads to less use of the technology. A lack of expertise along with incompatible school systems also effect the use of technology. Technology is pervasive across the ecological system, and data in this study suggests there are many barriers from each system effecting the possible equity technology could deliver for these participants.

## **Implications and recommendations**

Not only does the Bronfenbrenner model offer a way of understanding what is occurring in the life of an individual student with vision impairment in mainstream schooling, but also it shows what is not occurring. Where we would expect to see interaction between mesosystemic and inter-systemic elements, this is not evident. For example, there was no significant bidirectional interaction between school policy and teacher practice. The Bronfenbrenner model thus provides a platform for critique of processes and understandings that foster inclusivity and identifies shortcomings.

This was a phenomenological single-case study giving voice to the student at the center of his individual educational system, further informed by the voices of key supporters of his learning including parents, teachers and aides, and the school. The myriad of interconnecting microsystems with the technology microsystem via the mesosystem, along with the exosystem and macrosystem components extend well beyond what are mentioned in this study. Nevertheless, it is apparent that although there are many enablers apparent within global and school policy, teacher interactions, peer interactions and classroom practices, many barriers also exist related to the technology microsystem impacting on an inclusive education for the central student with vision impairment. The current findings revealed concerns that appear to be consistent for students with vision impairment, including access to technology experts, lack of teacher and aide expertise, school policy issues, and restrictive access to technology which all act as barriers to technology use and inclusive education. (Brown, Packer & Passmore, 2013; Chambers, 2011; Constantinescu, 2015; D'Andrea & Siu, 2015; Kelly, 2011).

By looking at the experiences of students with vision impairment in the context of Bronfenbrenner's ecological systems model with a focus on technology, recognition can be given to the complexity and interactions between microsystems, and that nothing exists in isolation. Specifically, the data revealed the unfulfilled potential of technology to enhance, support and increase student engagement with education. The need for the professional development for teachers and aides to upskill and keep abreast of rapidly developing and changing technology was highlighted. Anything less speaks to an attitudinal issue amongst staff combined with a lack of knowledge, training and empathy. It appeared that while students and parents knew what many of the issues were in the context of technology and how it could be used to enhance an inclusive education, their expertise, as captured in their

own quotes, was not recognized, accepted nor acted upon. Little heed was given to their assertions, which leads to a recommendation that school policy makers and teachers must be more involved with communication with the parents and students with vision impairment. Inclusive education involves schools recognizing the rights and capabilities of students as independent participants in their education and doing their best to accommodate students and so provide an equitable education, one in which the school adapts to the student's needs. Students need opportunities to maximize their independence and development, to be themselves and technology can assist in this endeavor.

### **Limitations**

This single-case study of one student and the ecological systems that surround him is not generalizable to a wider population, but the narrow focus does permit deep investigation of issues that may well have more universal application. It has long been recognized that “one good case can illuminate the working of a social system” (Gluckman, 1961, p. 9). This study is one such ‘good’ case in that, from the evidence, it should prove impossible to ignore the voice of the student who is at the center of their own education. Adopting the ecosystem framework assisted in imposing some order in the wide array of contextual factors operative in the schooling of a student with vision impairment within a system purporting to be inclusive.

### **References**

- Anderson, J., Boyle, C. & Deppeler, J. (2014). The ecology of inclusive education. In H. Zhang, P. W. K. Chan and C. Boyle (Eds.), *Equality in education: Fairness and inclusion*. Rotterdam: Sense Publishers
- Armstrong, D. (2005). Re-inventing “inclusion”: New Labour and the cultural politics of special education. *Oxford Review of Education*, 31(1), 135–51.
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2012). *Curriculum, assessment and reporting in special educational needs and disability: A thematic overview of recent literature*, research report. Sydney. Retrieved from [http://www.acara.edu.au/\\_resources/ACARA\\_Research\\_for\\_Publication\\_Final.pdf](http://www.acara.edu.au/_resources/ACARA_Research_for_Publication_Final.pdf).

- Bardin, J.A. & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness*, 102, 472-483.
- Bronfenbrenner, U. (1994). Ecological models of human development. In *International Encyclopedia of Education*, Vol. 3, 2<sup>nd</sup> Ed. Oxford: Elsevier. Reprinted in: Gauvain, M. & Cole, M. (Eds.), *Readings on the development of children*, 2<sup>nd</sup>. Ed. (1993, pp. 37 – 43). NY: Freeman.
- Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. *American Psychologist*, 32, 513-531.
- Bronfenbrenner, U. (1976). The experimental ecology of education. *Educational Researcher*, 5(5), 5–15.
- Bronfenbrenner, U. & Morris, P. (2007). The bioecological model of human development. *Handbook of child psychology*. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/9780470147658.chpsy0114/abstract>
- Brown, C. M., Packer, T, L. & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education*, 46(4), 223-232.
- Carroll, A., Forlin, C. & Jobling, A. (2003). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher Education Quarterly*, 30(3), 65-79.
- Chambers, D. J. (2011). *Assistive technology: Effects of training on education assistants' perceptions of themselves as users and facilitators of assistive technology and consequent transfer of skills to the classroom environment* (Doctoral dissertation). University of Notre Dame Australia. Retrieved from <http://researchonline.nd.edu.au/theses/62>
- Commonwealth of Australia (2005). Disability Standards for Education. Attorney General's Department. Retrieved from [www.comlaw.gov.au/details/F2005L00767](http://www.comlaw.gov.au/details/F2005L00767)
- Commonwealth of Australia. (2016). Senate Report: Education and Employment References Committee. *Access to real learning: The impact of policy, funding and culture on students with disability*. Retrieved from [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Education\\_and\\_Employment/students\\_with\\_disability/Report](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/students_with_disability/Report)
- Constantinescu, C. (2015). *Assistive technology use among secondary special education teachers in a private school for students with specific learning disabilities: Types,*

- levels of use and reported barriers* (Doctoral dissertation, University of Maryland, College Park).
- D'Andrea, F. M. & Siu, Y. T. (2015). Students with visual impairments: Considerations and effective practices for technology use. In *Efficacy of Assistive Technology Interventions* (pp. 111-138). Emerald Group Publishing Limited.
- Dale, N. & Sonksen, P. (2002). Developmental outcome, including setback, in young children with severe visual impairment. *Developmental Medicine and Child Neurology*, 44(9), 613-622.
- Digital Education Advisory Group. (2013). *Beyond the classroom: A New Digital Education for Young Australians in the 21st Century*. Retrieved from [https://docs.education.gov.au/system/files/doc/other/deag\\_final\\_report.pdf](https://docs.education.gov.au/system/files/doc/other/deag_final_report.pdf)
- Douglas, G., McLinden, M., Farrell, A. M., Ware, J., McCall, S. & Pavey, S. (2011). Access to print literacy for children and young people with visual impairment: implications for policy and practice. *European Journal of Special Needs Education*, 26(1), 39-46.
- Forlin, C. & Chambers, D. (2011). Teacher preparation for inclusive education: Increasing knowledge but raising concerns. *Asia - Pacific Journal of Teacher Education*, 39(1), 17-32
- Foreman, P. (2011). Introducing inclusion in education. In P. Foreman (Ed.), *Inclusion in Action* (3rd edn) 2-34. Australia: Cengage.
- Gluckman, M. (1961). Ethnographic data in British social anthropology. *The Sociological Review*, 9(1), 5-17.
- Griffin-Shirley, N., Parker, A. T., Smith, D. W. & Zhou, L. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment and Blindness*, 105, 533-539.
- Hatlen, P. (1996). The core curriculum for blind and visually impaired students, including those with additional disabilities. *RE:view*, 28, 25-32.
- Hay, J. (2012). The dilemma of a theoretical framework for the training of education support services staff within inclusive education. *Journal for New Generation Sciences*, 10(2), 92-105.
- Hyerle, D. (2008). Thinking maps: Visual tools for activating habits of mind. *Learning and Leading with Habits of Mind*. ASCD.
- Jackson, R. (2008). Inclusion or segregation for children with an intellectual impairment: What does the research say. *Queensland Parents for People with a Disability*, 1-29.

- Khadka, J., Ryan, B., Margrain, T.H., Woodhouse, M. J. & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Kelly, S. M. (2009). The use of assistive technology by students with visual impairments: Findings from a national survey. *Journal of Visual Impairment & Blindness*, 103, 470-480
- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment & Blindness*, 105, 235-239
- Macaulay, L., Deppeler, J. & Agbenyega, J. (2016). Access to quality education for students with disabilities. *Journal of Social Inclusion*, 7(2), 3-17
- McDonnall, M. C. & Crudden, A. (2009). Factors affecting the successful employment of transition-age youths with visual impairments. *Journal of Visual Impairment & Blindness*, 103(6), 329.
- McLinden, M. & Douglas, G. (2013). Education of children with sensory needs: Reducing barriers to learning for children with visual impairment. *The Routledge international companion to educational psychology*, 246-255.
- Media Access Australia (2013). *Inclusion Through Technology. Vision Education Scoping Report*. Retrieved from <https://mediaaccess.org.au/education/low-vision-blindness/vision-education-scoping-report>
- Messiou, K. (2012). *Confronting marginalisation in education: A framework for promoting inclusion*. New York, London: Routledge.
- Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2006). *Statements of Learning for Information and Communication Technologies (ICT)* Retrieved from [http://www.curriculum.edu.au/verve/\\_resources/SOL06\\_ICT.pdf](http://www.curriculum.edu.au/verve/_resources/SOL06_ICT.pdf)
- Moss, J. (2013). Visual research methods in education: In between difference and indifference. *International Journal on School Disaffection*, 10(2), 63-77.
- National Digital Learning Resources Network. (2012). *Using Digital Resources*. Retrieved from <http://www.ndlrn.edu.au/default.asp>
- Ravenscroft, J. (2013). High attainment low employment: The how and why educational professionals are failing children with visual impairment *The International Journal of Learning*, 18, 135-144.

- Ravenscroft, J. (2016). Visual impairment and mainstream education: Beyond mere awareness raising. In L. Peer & G. Reid (Eds.), *Special educational needs: A guide for inclusive practice*, (pp. 232-250). London, UK: SAGE.
- Sapp, W. & Hatlen, P. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment and Blindness*, 104(6), 338-346.
- Sharma, U. & Sokal, L. (2013). The impact of a teacher education course on pre-service teachers' beliefs about inclusion: An international comparison. *Journal of Research in Special Educational Needs*, 15(4), 276-284
- Singal, N. (2006). An ecosystemic approach for understanding inclusive education: An Indian case study. *European Journal of Psychology of Education*, 21(3) 239-252
- Slee, R. (2011). *The irregular school: Exclusion, schooling and inclusive education*. London, England: Routledge.
- Smith, J.A. (2008). *Qualitative psychology : A practical guide to research methods*. Los Angeles: SAGE.
- Smith, J., Flowers, P. & Larkin, M. (2009.) *Interpretative phenomenological analysis: Theory, method and research*. Los Angeles: SAGE.
- State Government of Victoria: Department of Education and Training. (2015). *ICT School Planning*. Retrieved from <http://www.education.vic.gov.au/school/teachers/support/Pages/planning.aspx>
- State Government of Victoria: Department of Education and Training. (2015a). *School Policy and Advisory Service. Using Digital Technologies to Support Teaching and Learning*. Retrieved from <http://www.education.vic.gov.au/school/principals/spag/curriculum/Pages/techsupport.aspx>
- Statewide Vision Resource Center. (2015) *Support for school-aged children with vision impairments in Victoria*. Retrieved from [http://svrc.vic.edu.au/Support\\_Vic\\_VI.pdf](http://svrc.vic.edu.au/Support_Vic_VI.pdf)
- UNESCO. (2005). *Guidelines for inclusion: Ensuring access to education for all*. Retrieved from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>
- UNESCO. (2009). *Policy guidelines on inclusion in education*. Retrieved from <http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>
- UNESCO. (2012). *Education: Addressing exclusion. A guide to assessing education systems towards more inclusive and just societies*. Retrieved from <http://unesdoc.unesco.org/images/0021/002170/217073e.pdf>

- UNICEF (2010). *Assessing child-friendly schools: A guide for programme managers in East Asia and the Pacific*. Retrieved from:  
[http://www.unicef.org/eapro/Assessing\\_CFS.pdf](http://www.unicef.org/eapro/Assessing_CFS.pdf).
- UNICEF and World Health Organization. (2015). *Assistive Technology for Children with Disabilities: Creating Opportunities for Education, Inclusion and Participation. A discussion paper*. Retrieved from <https://www.unicef.org/disabilities/files/Assistive-Tech-Web.pdf>
- Vision Australia. (2017). *Blindness and vision loss*. Retrieved from  
<http://www.visionaustralia.org/learn-more/newly-diagnosed/blindness-and-vision-loss>
- Vision Australia. (2015). *Submission to the 2015 Review of the Disability Standards for Education*. Retrieved from <https://docs.education.gov.au/node/40531>
- Wolffe, K.& Kelly, S. M. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment and Blindness* 105(6), 340-349.
- World Health Organization and World Bank (2011). *World report on disability*. Retrieved from [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf)

## Chapter 13

### Discussion and Conclusion

This chapter presents integrative discussion of the findings of the research, and at the same time aims to avoid unnecessary repetition of discussion points from the findings presented in the included papers of the thesis, although some reiteration may occur. The driving question of the study was:

What is the nature of the school experience for secondary students with vision impairment attending mainstream schools?

The included journal articles articulated the broad and diverse complexities of the individual participants' experiences and the range of effects these experiences had on their education and life. Findings captured revealing phenomenological streams of consciousness and rich descriptions which allowed for deep reflections of the lived experiences affecting education for seven students with vision impairment. The study showed both convergence and divergence of the individual case studies, eliciting patterning, ideas true for all cases, but also individual nuance, as participants illustrated their individuality. The outcomes of this study expands on the knowledge of schooling for students with vision impairment through the experiences of the students themselves, inviting a perspective rarely accessed but invaluable in revealing future actions which may enable the delivery of an inclusive education.

Each student participant had strong emotional aspects to their revealed experiences, particularly in relation to social isolation and bullying. Participants revealed their desire for acceptance that never eventuated, their feelings of loneliness and treatment as being 'other' and not belonging. Participants related the difficulties associated with accessing work readily available to their peers, and highlighted the increased workload often necessitated by inappropriate provision of worksheets and class tasks. They related difficulties associated with the often ineffective and sometimes negative assistance provided by aides and teachers. The exasperation associated with inappropriate, and often inept and unskilled provision of assistive technology was apparent, at a time when there was the potential for technology to alleviate many access issues. Each of these themes has been expanded in one or more of the published articles.

Smith (2011a) refers to gems, single extracts which have significance completely disproportionate to their size, which offer strong insight into the experience for the individual, "playing an illuminatory role in the research study" by revealing a depth of

feeling in just a few words, “shining light on the phenomenon” (p. 6). Some gems spoken by participants which highlighted a depth of feeling were:

- “They accept me, like as in I am there, but they just won’t talk to me.”  
This comment epitomizes isolation for this student. He is almost invisible to others.
- “You have to be like everyone else.”  
Inclusion is to be accepted as you are, not having to change to fit in. This was clearly not the feeling experienced by this student. He knew he was different. He couldn’t see and walked with a cane and appeared unacceptable to others. He could not change, and others would not accept him as he was.
- “It helps if you are a loud person.”  
This student believed that to be noticed was to be included, and being loud was his strategy for acceptance.

Each of these transfixing phrases was used as the title for a single, case study article.

Chapters 4 to 8 include journal articles of individual case studies, where the unreserved focus was on the interpretation of the revealed experiences of each participant. In the first article, Chapter 4, James was isolated, left out of the ‘in’ group he felt he belonged and would have been included had it not been for his vision impairment. He rued not having a peer with whom to discuss academic work, highlighting a consideration not widely reported in research, yet with consequences which may be considerable in terms of academic disadvantage. The second case study presented in Chapter 5 was of Edward, who felt he could almost pass himself off as a sighted person, illustrating his understanding that sightedness was more acceptable to others. He developed a strategy of being loud and unafraid of “telling it as it was” as a way of being noticed, a preference to being ignored. The third case study in Chapter 6 considered the experiences of Alex, who felt traumatized at school, and attributed this to excessive bullying by students and staff. He felt unsupported at the school, where expectations were that he should behave as a “normal” student. His differences were not accepted, and he had no sense of belonging at the school. The single-case study presented in Chapter 7 involved Nick, and revealed his social exclusion and the stigmatizing effect of his vision impairment. Nick made excuses for the poor behaviour of his peers and teachers stating, “they don’t understand” as if that somehow made being bullied and his isolation acceptable. The journal article presented in Chapter 8 considered the factors of access to school-work, time, subject specific exclusionary practices, technology and

mobility that impacted on James's schooling. A lack of understanding of the impact of vision impairment was highlighted.

The impacts of aides and support were considered in Chapter 9. The overwhelming feeling of participants was that their support from teachers and aides was inadequate and inconsistent. Participants felt that with better support and education, teachers and aides might have been better placed to assist them. Chapter 10 looked at technology. Teachers' knowledge and understanding of the assistive technologies was found to be insufficient for the participants' needs. Teachers were not prepared in the use of the assistive technology and were unable to teach students how to use it, nor did they seem able to keep abreast of the current technology. Chapter 11 considered the impact of the ECC. From the experiences of the participants, it was apparent that VTs were unable to ensure all essential components of the ECC were provided for them, nor were they able to ensure teachers knew about the disability specific nature of these components. Participants revealed many hardships caused by curriculum delivery, social isolation, curriculum access and self-determination, all skill components of the ECC.

Chapter 12 presented technology viewed within Bronfenbrenner's bioecological perspective reconceptualised as the ecology of inclusive education. Consideration was given to technology at each system level. Students found many barriers and few enablers for their effective use of technology in the classroom at all levels. In particular, participants reported experiencing negative attitudes and impeding practices by teachers and aides who possessed little awareness and understanding of their specific technology needs.

From these nine chapters, concerns and possible solutions were revealed by the students' themselves. If these solutions had been present in the participants' classrooms and general schooling, they may well have assisted in their attainment of an inclusive education, free from exclusion and bullying, supported by appropriate technology for curriculum access and the development of independence and social skills. While these recommendations were made from consideration of the revealed experiences of these particular students, they may have relevance and applicability in the support of other students with vision impairment in their pursuit of an inclusive education. Helping others was put forward by the participants as the main reason for their decision to be part of the study.

## **Reflection on findings**

This study captured the nature of schooling experiences for the participating students with vision impairment. From their experiences, it was evident they did not have a quality education that was equitable with their peers. Although accommodations were made and positive intentions apparent, participants revealed others' lack of understanding for their situation often led to exclusion. It is noted that participants were succeeding academically as they had all progressed to Year 12, (other than Nick in Year 10), but it was not seen to be in an atmosphere of inclusive practice. In answering the research questions, this study revealed a number of areas in which action could have been taken to improve the inclusive education of these students. Consideration of each of the themes highlighted by participants will be briefly presented below, and apologies are made once more for repetition. Themes of participant isolation, effect of isolation on academic attainment, bullying, non-inclusive practices, peer education, teaching of the ECC, teacher education, individualised learning plans, support staff, technology and subject specific exclusion will each be addressed in turn.

### **Participant isolation.**

Participants were actively ignored or shunned by their peers. They were often the victims of bullying and harassment. Students were unable to cement friendships and too often had fewer than one or two peers they noted as friends but who were possibly little more than acquaintances. In most cases, the participants were the only student with vision impairment attending their school, and sometimes the first student to ever attend. This was not only an isolating factor for the student but also exposed the difficulty teachers and peers had in understanding how to interact with students with vision impairment. Since the closure of the Royal Victorian Institute for the Blind (RVIB) in 2009, students with vision impairment may instead attend occasional small group classes provided by the Department of Education Statewide Vision Resource Centre. Most participants in this study, however, were reluctant to attend after negative experiences or the inconvenient withdrawal from school classes. Students engaged more with Guide Dog, whose camps they considered worthwhile, providing the opportunity to mix with other students experiencing comparable difficulties. One participant discovered swish was available at Vision Australia which was invaluable for his connection with other students with vision impairment.

A parent bemoaned the closure of RVIB and the loss of meaningful relationships it could have provided for her son as it had done for her brother. She was thwarted in her

attempt to find a school knowledgeable about vision impairment, or with another vision impaired students in attendance, being informed that this information could not be given out for privacy reasons. She believed in the benefits to be gained for her son in having a few friends with the same disability with whom to discuss associated issues, and for his teachers to have had prior experience of vision impairment enhancing their understanding of the disability.

Participants in this study alluded to the difficulty of making friends. Only the two students who had attended both the junior and senior school years at their private school appeared to be in a better position socially. Of greater concern to students in this study was the experience of being the only student with vision impairment at their school. Students believed they would have benefitted from attending a school where students and teachers were more au fait with students with vision impairment, which could lead to greater understanding of issues they were facing.

#### **Academic effect of isolation.**

Participants did not have established friendship groups with whom they could discuss work issues. They were unable to have discussions with peers regarding timelines for School Assessed Coursework requirements, expectations and difficulties encountered, share information or work together. Participants were isolated and either worked alone or relied on parental support.

#### **Bullying.**

Most participants experienced bullying, and in some cases, it was extreme and quite traumatic. Although schools may have had anti-bullying policies in place, these were either not enforced or not effective. In some cases, classroom management and pedagogy was found wanting, resulting in feelings of not belonging.

#### **Non-inclusive practices.**

The notion that participants had the right to 'be themselves' and schools would make adjustments and changes to accommodate them was clearly not understood by school communities. Participants were expected to "conform to the norm", and "fit in", and behave and work in a manner exactly as their peers. An understanding of the Disability Discrimination Act (1992) and The Disability Standards for Education (2005) was not evident.

### **Peer education.**

In this study, several participants spoke about their classmates not understanding their disability. Past research has shown that a person with a disability can appear foreign and difficult to conceptualize for people without disabilities and a social–psychological challenge, with many well-intentioned nondisabled students uncertain how to interact (Robey, Minihan, Long-Bellil, Hahn, Reiss & Eddey, 2013). Students can only imagine what the experience of disability must be like, often incorrectly concluding that it must be a negative, disruptive and an ongoing preoccupation. Past research contends those with a disability only focus on their disability when those without disability or situational constraints make it significant (Dunn, 2016). Although understanding is essential, consciousness-raising exercises, such as covering the eyes of a sighted person to mimic blindness, as experienced by some students and aides, may be inappropriate. Participants were not particularly comfortable with the activity, past research contends that such exercises lacked integrity, and gave participants a misleading sense of what it means to have a disability (Dunn, 2016).

### **Teaching of the ECC.**

The importance of developing social interaction skills, self-determination and independence skills was particularly apparent in this study. The essential nature of teaching students with vision impairment the components of the ECC, which are the unique skills needed to access the core educational curriculum and become independent individuals, is widely accepted (Sapp & Hatlen, 2010; Allman & Lewis, 2014; Kelly, 2015). For the participants, facilitating curriculum access by the provision of enlarged copies or emails of worksheets and notes for access to learning, while promoting independence of learning by using technology should have been paramount (McLinden, Douglas, Cobb, Hewett, & Ravenscroft, 2016). With advanced advocacy skills, another ECC component, students may have been empowered to voice when they felt excluded, marginalized, demeaned, or bullied, and to ask for the modifications and teaching approaches needed for curriculum access. With the noted scarcity of input from VTs responsible for ECC implementation in this study, it was incumbent upon participants' teachers to become familiar with the ECC components and to deliver these in their classroom, supported by a VT. In this study, teachers were unaware of the components of the ECC, and VTs had not been successful in increasing awareness of issues related to non-delivery.

### **Teacher education.**

Of importance is that teachers understand how the difficulties experienced in learning for students with vision impairment are dilemmas for teaching rather than problems within the students (Florian, 2012). The lack of knowledge by participants' teachers of the unique aspects of vision impairment was a major barrier for all participants in accessing an inclusive education. The need for their teachers' to be educated in vision impairment was apparent.

### **Individualised Learning Plans (ILPs).**

There was a noted dearth of communication between people pivotal in the education of the participants in this study. Regular support group meetings with all teachers of each participant, parents, VTs and aides did not occur. Australian Education Standards (2005), unlike many countries, do not mandate ILPs for students with a disability. An ILP generally consists of instructional services and accommodations for the student with disabilities that must be tailored to meet the needs of the student and reviewed and updated annually. As a result of this study it was recognized that had ILPs been mandatory for the students with vision impairment, with regular meetings and greater collaboration, the needs of the participants' may have been better facilitated.

### **Support staff.**

Aides were regularly employed to directly support the inclusion of students with vision impairment into mainstream classrooms, but their constant proximity may have affected students' learned helplessness, the creation of increased dependence, the decrease in interactions with peers and negatively impacted on self-esteem. Participants varied in their reflections on aides. Both James and Edward spoke highly of their aides assisting with their academic challenges, but their school had employed qualified secondary teachers as aides. Other students lamented the lack of academic expertise of their aides and were quite negative about their interactions. It was suggested that aides needed more extensive training to develop an understanding of vision impairment, inclusive practices and an ability to support participants academically, as this was often an expectation of their role. The role of an aide needed to be more explicit, with participants often confused about the support they could expect. Communication appeared lacking between the key personnel, and needed to be addressed for aide support to be an asset rather than a liability.

### **Technology.**

Participants in this study considered access to technology and appropriate training and expertise of major importance for their education. This was an area of great concern for all participants. Participants described their teachers as having little understanding of the real difficulties they had in accessing material on the same basis as their peers, or accepting it was their responsibility to ensure this occurred. With the rapid development of technology in this digital era, no student with vision impairment should have difficulty accessing information from worksheets or board notes if appropriate assistive technology and specialist training were available. All students are now familiar with iPads, iPhones and similar technology, so any stigma that may have occurred because of large, noisy or clumsy equipment could be avoided, with participants not seen as different because of its use. Participants often used iPhones to assist with mobility, increasing their sense of independence. However, the limited use of technology overall was a direct consequence of the lack of training for both teachers and students. The difficulty of being updated and trained on the ever-changing current best equipment available appeared insurmountable, with a lack of engagement of the services of specialists in training and troubleshooting. Without specialist expertise, the use of assistive technology remained highly underutilized by participants. VTs did not have the expertise nor time allocation required to ensure current technology and skills were acquired by participants.

### **Subject specific exclusion.**

Participants all found gaining an equitable exposure, particularly to STEM subjects, extremely difficult. The participants, as other researchers have also found, were met with stereotypical teacher views of what they could and could not do, which influenced their instruction and participation. Students spoke of science teachers who considered practicums too dangerous, but offered no alternative access to the material. Teachers' appear uninformed about student dexterity in the kitchen, and appeared unwilling to take any responsibility for similar activities in the science classroom. Use of online activities or YouTube demonstrations of the practicums were not offered as an alternative. Instead, students were excluded from the subject altogether. Exclusion from the physical activities of sport and PE was also common for participants, with difficulties exacerbated by the lack of appropriate accommodations which could allow participation. A few exceptions were noted, such as the introduction at one school of swish, a form of table tennis, which allowed for participation and social interaction. Unfortunately, this was one school only, and only for one year. Aside

for the benefit of being able to interact with others, this had a significant impact on the participant's feeling of importance to the school and his sense of belonging.

## **Recommendations for consideration from the participants**

It is recognised that this comparatively small sample does not represent the experiences of all students with vision impairment who attend mainstream schools, and may not be relevant for others with vision impairment or all teachers and aides of students with vision impairment. However, there was a consistency between participant understandings that suggests that their experiences may not have been uncommon. Some practical recommendations for school leaders and teachers from the participants in this study, considered as warranting their further consideration, are listed below.

- Students with vision impairment must be included in discussions prior to any decisions made on their behalf.
- Students with vision impairment should be included in regular ILP meetings.
- Students with vision impairment must receive instruction in all subjects, including STEM, and alternative deliveries should be offered if agreed to be necessary.
- A range of sporting activities playable by all students should be offered to students. Students with vision impairment must be included in group activity not given an alternative isolated activity.
- Students with vision impairment must be given access to all written work accessible to their peers, preferably via emails, if the technology provided and expertise is inadequate for the task.
- Students with vision impairment need the components of the ECC to be delivered, with social skills in particular to be addressed.
- Students with vision impairment require those with technology expertise to recommend and train them in technologies to be used.
- If parents of a student with vision impairment desire to find a school already familiar with accommodating a student with vision impairment, they should be supported.
- Parents of students with vision impairment should be invited to attend regular ILP meetings.
- Teachers of a student with vision impairment should understand the implications of vision impairment for the educational engagement of their students.

- Teachers should support all students to understand disabilities.
- Teachers need to be proactive in recognizing bullying exists and implement the school policy and strategies to address this.
- Schools need to address problems with ageing assistive technologies, maintenance and school compatibility.
- Teachers must develop teaching strategies to accommodate all students in all classes.
- Aides should have clear roles and responsibilities, and these should be communicated to the student, parents, and teachers.
- Aides must have qualifications commensurate with their role expectations.

The results of this study confirmed that students with vision impairment can provide invaluable information on matters involving their education, each offering unique experience viewpoints. When themes outlined from individual participants were considered, themes emerged indicating lived experiences of isolation and exclusion. Other concerns raised by participants included teacher education, curriculum access, aide support, technology, the ECC, and exclusionary practices. Research literature confirmed persistent negative attitudes and unpreparedness to support students with disabilities (Koomen, 2016). The research, literature and policy contexts are considered in relation to the contribution to knowledge made by this study. Key implications for practice, policy and theory are outlined.

### **Implications: Policy and practice**

As noted in Chapter 1, current international policy on disability emphasises the right to education for all without discrimination, respecting diversity in an inclusive environment where barriers to accessing quality education or leading to exclusion are identified and removed. Australia's Disability Discrimination Act, Disability Standards for Education and curriculum policies are consistent with these international policies in addressing the rights of all children to have fair and equitable education. As a corollary to this, most students with vision impairment now attend mainstream schools with the expectation of inclusive schooling. Data of this research, however, revealed that despite these legislative policy frameworks, inclusive education was not a reality for the participants. It must be acknowledged that for them there were serious implications concerning policy implementation. Many of their concerns reflect issues raised in the Review of the Standards (Commonwealth of Australia, 2015), and previously raised in the first review in 2010. It is of

concern that significant changes have not eventuated to deal with issues raised, and the participants signify that for them, although there may be some positive progress, inclusion was far from a reality. The major themes revealed by participants will each be considered individually.

### **Exclusion**

International, Australian and state policy refer to an inclusive education proactive in identifying and eliminating barriers that exclude or marginalize learners (UNESCO 2012). For participants in my study the reality was they were often excluded from classes in subjects such as science and sport rather than approaches changed to facilitate their inclusion. Findings of past research contend that this reflects stereotypical views often held by teachers and aides of perceived dangers (Kumar, Ramasamy & Stefanich, 2001; Koomen, 2016; Lieberman, Houston-Wilson, & Kozub, 2002). Participants' school communities failed to ensure effective implementation of policies at the school and teacher level for equitable access to learning. Participants revealed a need for greater understanding by the whole school community of the inherent difficulties associated with their disability. These unique disability specific features have been well documented, and should be addressed by the implementation of the ECC (Sapp & Hatlen, 2010).

### **Isolation**

Past research has acknowledged isolation as particularly concerning for students with disability, (Vlachou & Papanou, 2015; Pitt & Curtin, 2004) with students revealing experiences of loneliness and exclusion, of being a curiosity, and of not being made to feel welcome (Curtin & Clarke, 2005; Cefai & Cooper, 2010; Gibson & Kendall, 2010; Zebehazy & Smith, 2011). The impact of isolation was also revealed as a major issue for participants in this study, indicative of exclusion and marginalization. Participants' teachers appeared unable to address isolation as an exclusionary factor, leaving participants open to practices of academic and social isolation and bullying. Past research has highlighted the essential role of socially accepting and supportive school environments where students can experience positive interactions with peers and develop meaningful friendships (Christensen, 1996; Morrison & Burgman, 2009).

Participants were universal in acknowledging the ease of interactions with other vision impaired students. Implementing a strategy as a matter of course for students with

vision impairment to connect with others with vision impairment might support inclusionary practices, by providing an avenue through which to discuss any negative experiences, and the opportunity to develop strategies to overcome them. Participants reflected most positively on their experiences of meeting other students with vision impairment at Guide Dog camps, highlighting this as the only time they felt others really understood them. This study supports the need to listen to the concerns of students and their suggested solutions, in this case, to provide more positive interaction experiences, allowing them to see they are not alone and that others share their reality.

### **Teacher education**

Participants in this study revealed educational experiences that were not equitable with peers. It is an expectation that all Australian training providers know and implement the Standards and make the necessary adjustments to make participation in education equitable. It has been documented that placement in unprepared environments implies pressures to fit into already existing educational and social processes and practices, which afford little space for understanding difference (Diez, 2010; Vlachou & Papanou, 2015). The recent Department of Education and Training initiative to provide all teachers with the opportunity to improve their knowledge of Australia's Disability Discrimination Act, and the Disability Standards for Education, with the completion of a selection of PD units an additional requirement of teacher registration, is an acknowledgement of the general concern regarding this issue. The implementation of policy, not just knowledge of policy, would then become a priority to ensure concerns raised not only in this research but in the Review of the Standards (2015), are appropriately addressed.

Another consideration is that while most states and territories across Australia including Victoria have mandates to include subjects on inclusion in their pre- teacher education courses, they remain very narrowly focussed, with no single unit denoted to vision impairment, although it may be included as a topic. What could be more important would be to include pedagogical frames or processes that address how teachers might adapt their methodology for a range of individual disabilities and differences in accommodating for the specific nuances of each disability. For teachers to engage learners from all disability groups (e.g. vision impairment, hearing impairment, dyslexia, autism, SLD's, non-English speakers), an understanding of the myriad of disability-specific needs of each group should be better understood for more appropriate inclusive methodology. A "one-size-fits-all" approach has

long been regarded as insufficient (Tomlinson, 1995, 2014; Ferguson, 2008; Jarvis, Bell & Sharp, 2016), with an understanding of the needs of the individual essential to an appropriate educational program (Taylor & Mescos, 2017). As stated in the document on choosing PD activities for VIT registration, “You should consider your teaching context, your learners’ characteristics and needs, and your own level of learning; a ‘one size fits all’ approach cannot be taken” (VIT, 2017). This succinctly expresses the necessity of knowing individual learners’ characteristics and needs, in order for appropriate methodology and practice to cater for the requirements of all individual students.

### **Specialist teachers of vision impairment**

In practice, support for students with vision impairment in the US and UK is addressed by specialist teachers of vision impairment (VTs), often teaching in schools that exist for students with vision impairment (Ravenscroft, 2015). In Scotland, as elsewhere in the UK and US, it is mandatory for a teacher to obtain an additional qualification in vision impairment when working with these students (Scottish Executive Education Department, Support for Learning Division, 2007; National College for Teaching and Leadership, 2015; Ravenscroft, 2015). In Australia, VTs also undergo training in addition to their teaching qualification. Students in Victoria, however, appear to be in a relatively unique situation, with possibly only one student with vision impairment in attendance at each school, often resulting in students having relatively few contact hours with a VT. The issue of support could be addressed with the employment of more VTs to work with students. If the apparent shortage of VTs cannot be addressed, a solution is for VTs to use their time upskilling teachers in the establishment of learning experiences and practices for improving the social skills of their student with vision impairment, thereby empowering students with vision impairment in their social interactions.

### **Expanded Core Curriculum**

While inclusive practice should embrace shared curricula, it is also incumbent upon schools their inclusive practice pays attention to curricula of particular relevance to some groups, such as the ECC, as failure to do so would be unfair and exclude. This has been described as the ‘dilemma of difference’ (Norwich, 2008, 2013); on one hand, seeking to construct an inclusive curriculum which is relevant to all, and on the other hand identifying an additional curriculum for needs of particular relevance to some. Specialist teachers of students with

vision impairment in the UK and US are expected to be qualified in the knowledge and implementation of the ECC, a curriculum devoted to the development of skills to address specific needs unique to vision impairment (Ravenscroft, 2015; Sapp & Hatlen, 2010; SVRC, 2015; Vision Australia, 2016). Concerns expressed by participants in this study reflect an environment where many of the ECC components were not delivered. Similar concerns were raised in the Disability Standards Review (2015), with Vision Australia drawing attention to the lack of VTs available for its instigation. The lack of knowledge of vision impairment and of the ECC by school communities could be in part addressed by providing instruction of the ECC to teachers and aides. The inclusion of a unit on vision impairment and the ECC could be introduced alongside current units on dyslexia and hearing impairment, available as PD units for annual Victorian Institute of Teaching registration (2016). This unit could be made mandatory for teachers and aides involved with educating any student with vision impairment.

### **Individual Learning Plans**

It is an imperative that school policy is enacted and implemented to guarantee the formulation of an ILP for students with vision impairment. A mandated policy in the US and UK, it remains optional in Victoria. This would provide for communication to exist between the VT, student, parents, teachers, peers, aides, O&M officer and the educational psychologist (if existing) to jointly clarify the ECC skill areas of need for the student, the manner in which they are best addressed and student achievement. Communication is key.

### **Technologies**

All participants in this study reported barriers to their access and use of specific technology for their learning. As reported in past research, participants were unable to access information efficiently, experienced compatibility issues with school networks, and expertise was unavailable to educate them in the use of the best technologies available (Ajuwon, Meeks, Griffin-Shirley, & Okungu, 2016; Flanagan, Bouck & Richardson, 2013; Siu & Morash, 2014). International, National and State policy recognizes the importance environmental influences, with the recognition of the provision of assistive technology to students with vision impairment. The Convention on the Rights of Persons with Disability (United Nations, 2006) refers to barriers created, such as “a blind person using a computer without screen-reading software” (The WHO and World Bank, 2011, p. 4).

Technological expertise is required when working with students with vision impairment. It is important that those directly working with students with vision impairment have the relevant technological expertise in current assistive and interactive technologies most appropriate for their requirements (Kelly, 2011; D'Andrea & Siu, 2015). Students with vision impairment should engage with rapidly changing technologies, in the same way as all other students, ensuring equity of access.

The implications for practice in terms of teacher education could be in part addressed by in-service PD's and training for teachers, aides and auxiliary staff. It is recognized that much greater expertise is a necessity and to this end schools should look to policy which will address the engagement of appropriate experts as required.

### **Aides**

The findings highlighted that although aides may have been well-intentioned, participants often had negative experiences, attributing this to aides' limited understanding of vision impairment. Participants felt that aides hindered rather than helped with technology, were the cause of considerable isolation from teachers and peers, and had insufficient academic knowledge for their Year 12 studies. Aides appeared to be taking on roles for which they were neither educated nor well prepared. Past research in Australia (Australian Association of Special Education, 2007; Bourke & Carrington, 2007; Butt & Lowe, 2012; Forlin, 2001) indicated the existence of role confusion, as well as differing perceptions by both class teachers and aides of the skills required to perform in the role of aides.

Currently no policies exist in Australia for the deployment of aides. It has been widely reported that the roles, responsibilities and skills needed to be aides have increased in recent years as more students with special needs have been enrolled in mainstream classes. This is apparent not only in Australian schools, but also a trend in the US and the UK (Butt & Lowe, 2012; Fisher & Pleasants, 2012; Giangreco, 2010a; Rose & Forlin, 2010), with an accompanying uncertainty regarding the appropriate utilisation of aides to support students with special needs (Blatchford, Bassett, Brown, Martin, Russell & Webster, 2009; Blatchford, Webster & Russell, 2012). Aides are increasingly expected to perform more complex tasks in the classrooms, requiring specific skills to enable them to perform in their role (Butt & Lowe, 2012; Carter, O'Rourke, Sisco, & Pelsue, 2009; Fisher & Pleasants, 2012; Giangreco, 2013; Howard & Ford 2007; Webster et al., 2010). Research supports the concerns of my participants that aides are untrained to perform expected duties and lack the

necessary skills (Butt & Lowe, 2012; Chambers, 2015; Giangreco, 2013; Suter & Giangreco, 2009; Wilson & Bedford, 2008). The need for clearly defined duty statements for aides has been signified (Webster, Blatchford, Bassett, Brown, Martin & Russell, 2010, 2011).

In Australia aides are not required to have any formal qualifications nor training (Stephenson & Carter, 2014). Aides in Victoria may choose to complete courses offered through the Vocational Education and Training (VET) sector, but it is not a prerequisite to their employment (Victoria State Government, Education and Training, 2016). Researchers have expressed surprise that the practice of employing aides to support students with disability and learning difficulties continues in schools when there is a lack of evidence attesting to the efficacy of aides enhancing student outcomes (Giangreco, Suter & Doyle, 2010). Little research has been undertaken in Australia to identify the effect of aide support on students' learning outcomes (Shaddock et al. 2009), with research suggesting that aide impact is variable and may, under some circumstances, be detrimental (Blatchford, Webster, & Russell 2012; Giangreco & Doyle 2007; Butt, 2016).

The questioning of the educational value of aides in the classroom has been raised as a consequence of the extensive UK research project, Deployment and Impact of Support Staff (DISS) (Blatchford et al., 2008, 2009, 2009a, 2009b), which had as a focus the relationships between aide deployment and student achievement. Implications from their study were that aides were not to be blamed, but the responsibility for their potential misuse and overuse was the concern of the educational systems. More training alone was not considered a satisfactory solution, with a greater commitment to confront the inherent worthiness of all students a necessity. Concerns were raised that efforts to advance inclusive education have attempted to 'retrofit' existing service delivery models that were not initially intended to accommodate the range of student diversity currently present in mainstream schools (Giangreco, 2010b). Collaboration with special educators and a review of their roles, potentially involving a shift away from traditional approaches narrowly focussed on remediation towards a more collaborative, co-teaching, differentiation and universal design in classrooms has been a recommendation (Giangreco, 2010b, 2013). This research is consistent with these international studies and emphasises the need for professional standards and formulation of policy at National, State and school level around the deployment of aides. The role of aides must be more clearly defined, to deal with the apparent conflicting views held by aides and teachers and confusion regarding the skills and training required (Butt & Lowe, 2012).

## **Leadership and Collaboration**

Policy dictates consultation is paramount to the education of students with disability, as reflected in the statement from The World Report on Disability (WHO & World Bank, 2011) which declares that referral to the experience of impairment is essential in determining barriers, with the recommendation to consult and involve children in decisions about their education. This did not occur for the participants in this study. Participants were seldom, if ever, consulted about decisions made on their behalf by sighted persons. There is also International and National policy concerning the parents' "inherent right to be consulted on the form of education best suited to the needs, circumstances and aspirations of their children" (UNESCO, 1994, p. 6), and the recognition of the importance of parental support in facilitating inclusive education (de Boer, Piji & Minnaert, 2010; Palmer, Fuller, Arora, & Nelson, 2001), but participants' parents were rarely consulted. It is not enough for policy to exist, it must be implemented.

A key to quality education and equitable education has been stated as school leadership (Jarvis, Bell & Sharp, 2016). It has been espoused that,

While effective practices cannot be implemented without the instruction of the governments and education systems that provide appropriate directions and support, implementation will not be effective without the total commitment of the school leaders and teachers ... who will be required to implement the change (Forlin & Lian, 2008).

Research has suggested school leaders often underestimate the magnitude of cultural change required to build teachers' capacity for diversity in the classroom and to embed genuinely inclusive practices into all aspects of educational practice (Jarvis, Bell & Sharp, 2016; Mills et al., 2014; Tomlinson, Brimijoin & Narvaez, 2008). For education policies addressing equity and policy to be successfully enacted at school level for students with vision impairment, there must be representation and collaboration among all members of the school community including the student and parents. If school policies do not reflect the State and National policy through leadership and practice, an inclusive education for these students will not eventuate.

## **Implications for Theory**

Consistent with the tenants of IPA, this study confirmed its utility in better understanding the experiences of vision impaired students. It also demonstrated that its application may not be

as appropriate where student feelings and emotions are not paramount, such as when discussing the practical use of technology. We must remain cognisant of the fact that not all phenomenologically based studies of qualitative research studies lend themselves to an IPA analysis, and its application must be judicious. The efficacy of a mix of interpretive qualitative research approaches (Elliott & Timulak, 2005), was demonstrated in the case of the participant, Nick.

While every effort was made to understand the experiences of the participants in the study when interviewing and analysing the data using IPA, the analyses were of the remembered experiences of participants and may have been affected and changed over time. Insights can only be related to what each participant chooses to reveal, and the analysis, being interpretive, was my understanding and interpretation of what the student was feeling and revealing about their experiences.

There remain particular cautions for researchers in working with populations who have disabilities. Participants may be unable or unwilling to reveal their innermost emotions associated with their past experience of, for example, their social isolation, not wanting to be perceived as even more inadequate than they already perceive others to perceive them. A further conceivable limitation of the study is the very fact that as a researcher I am drawing attention to what makes or has always in their lives denoted them as different, and that in a way is somewhat of a paradox given that while valuing inclusive education I am doing a study on difference. While it could be perceived as a limitation, the value is that it does allow deep and valued research, giving voice to the participants themselves.

### **Concluding remarks and further research**

The rich data of this study revealed the nuanced understandings of vision impairment that are not readily available unless student voice is heard. By encouraging the students to describe their experiences of school life, researchers have an opportunity to gain rich data that can inform an understanding of the education provided to them. In the past, it has been the experiences of teachers, parents, therapists and para-professionals who have informed our understanding of both the provision made for students with a vision impairment, and the impact that this had upon their education. In this study, the voices of participants have provided personal accounts of their day to day experiences of school and their feelings about the support they were afforded. A plethora of concerns requiring further consideration were revealed by the participants. If, for any one of the cases in this study, the school leaders or

teachers themselves had used evidence from the student's feedback, many of their issues may have been ameliorated. The data suggests that while schools may have recognised the need to develop systems and approaches in recognition of the needs of students with vision impairment, considerable further effort was required before an inclusive education, one that is equitable to their peers, was a reality for these participants. Students could articulate possible solutions to issues they felt were exclusionary, highlighting the importance of seeking their understandings of situations as they experience them. Equity of access to all subjects, training in current assistive technology, teacher understanding of vision impairment and isolation and bullying were concerning matters for participants. Had more extensive research been conducted in the past with a focus of listening to the voices of students with vision impairment, improved understandings and resolutions of perceived issues may have been elicited, resulting in a more equitable and inclusive education.

A number of future research directions were revealed following careful consideration of findings revealed in this study. Firstly, student voice was integral to understanding the educational experiences of students with vision impairment in this study, and revealed the nuanced understandings of vision impairment that are not readily available if student voice had not been the focus. Using student voice and expanding the contexts of the study to include early school leavers and students successfully entering university would allow more robust understandings to emerge. The views of those leaving school early are particularly relevant today as past research has highlighted ongoing concerns for the underemployment of people with vision impairment, associated with inadequate educational attention to the specific needs related to this impairment, and early leaving (Kelly, 2016; Ravenscroft, 2013). Research of those students with vision impairment who have successfully completed school could also be beneficial, with these students engaged as experts to support the direction of future research or teacher education.

The findings of this study could be further augmented through broadening the range of responses by using surveys of Australian students with vision impairment and their families. The focus of the surveys could be the themes as generated by the participants of this study to ascertain the extent of issues revealed by this study.

It is also proposed that there is a strong case for research which, like the UK DISS project (Blatchford et al., 2009), could seek to examine the effects not just of the amount of support students in Australia receive, but of the particular facets of the wider pedagogical role of aides on pupil learning, behaviour and attitudes to learning. To employ unqualified staff in schools to support students with disability who need assistance with learning is an equity

issue (Butt, 2016). As students have the right to receive instruction from a qualified teacher, why this practice has been allowed to continue without evaluation warrants further research.

Expanding the context of research to consider the effect on students with vision impairment of being educated in isolation, as the only student with vision impairment at a school, would allow for more understanding to emerge. Research could compare the Queensland model (Queensland DET, 2013), of units with resources for students with vision impairment attached to particular schools, with that operating in Victoria, where single students are scattered throughout schools. Future studies could also evaluate the provision and effectiveness of social skills programs for students with vision impairment.

While recommendations have been made on the basis of the participants' revelations, more extensive research is needed to verify the veracity of student needs and proposed suggestions prior to any consideration of implementing recommendations to ensure they are relevant to the larger population of students with vision impairment in Victoria and further afield.

Finally, my belief is that in-depth qualitative phenomenological case studies involving not only students with vision impairment, but also other disabilities, offer a source of knowledge and understanding vital to the provision, not just of an integrated education, but one that can reach for the ideals of inclusion. Studies of detailed and personal experiences of students are essential in revealing intricate knowledge and deeper understanding before considerations can be made on their behalf. Fields of research require time and researchers passionate in the field. While I believe this thesis contributes to the knowledge and understanding of schooling for students with vision impairment, I hope it also inspires other researchers to delve further into learning from students with disabilities, in order to maximize their inclusive educational possibilities.

## References

- Adderley, R., Hope, M., Hughes, G., Jones, L., Messiou, K., & Shaw, P. (2015). Exploring inclusive practices in primary schools: Focusing on children's voices. *European Journal of Special Needs Education, 30*(1), 106-121.
- Agee, J. (2009). Developing qualitative research questions: A reflective process. *International Journal of Qualitative Studies in Education, 22*(4), 431-447.
- Agran, M., Blankenship, K., & Hong, S. (2007). Promoting the self-determination of students with visual impairments: Reducing the gap between knowledge and practice. *Journal of Visual Impairment & Blindness, 101*(8), 452-464.
- Agran, M., Sinclair, T., Alper, S., Cavin, M., Wehmeyer, M., & Hughes, C. (2005). Using self-monitoring to increase following direction skills of students with moderate to severe disabilities in general education. *Education and Training in Developmental Disabilities, 40*(1), 3-13.
- Ahern, K. J. (1999). Ten tips for reflexive bracketing. *Qualitative Health Research, 9*, 407-411.
- Ainscow, M. (2005). Developing inclusive education systems: What are the levers for change? *Journal of Educational Change, 6*(2), 109-124.
- Ainscow, M. (2012). Moving knowledge around: Strategies for fostering equity within educational systems. *Journal of Educational Change, 13*(3), 289-310.
- Ainscow, M., Farrell, P., & Tweddle, D. (2000). Developing policies for inclusive education: A study of the role of local education authorities. *International Journal of Inclusive Education, 4*(3), 211-229.
- Ajuwon, P. M., Meeks, M. K., Griffin-Shirley, N., & Okungu, P. A. (2016). Reflections of teachers of visually impaired students on their assistive technology competencies. *Journal of Visual Impairment & Blindness, 110*(2), 128-134.
- Allan, J. (2008). *Rethinking inclusive education: The philosophers of difference in practice*. Dordrecht, The Netherlands: Springer.
- Allan, J. (2010). The sociology of disability and the struggle for inclusive education. *British Journal of Sociology of Education, 31*(5), 603-619.

- Allman, C. B., & Lewis, S. (Eds.). (2014). *ECC essentials: Teaching the expanded core curriculum to students with visual impairments*. New York, NY: AFB Press.
- American Federation for the Blind. (2016). *The expanded core curriculum for blind and visually impaired children and youths*. Retrieved from <http://www.afb.org/info/programs-and-services/professional-development/teachers/expanded-core-curriculum/the-expanded-core-curriculum/12345>
- American Psychological Association. (1992). *Guidelines for nonhandicapping language in APA journals*. Retrieved from [www.apastyle.org/manual/related/nonhandicapping-language.aspx](http://www.apastyle.org/manual/related/nonhandicapping-language.aspx)
- American Psychological Association. (2008). *Resolution on the Americans with Disabilities Act*. Retrieved from [www.apa.org/pi/disability/resources/policy/resolution-ada.pdf](http://www.apa.org/pi/disability/resources/policy/resolution-ada.pdf)
- American Psychological Association. (2010). *Publication manual of the American Psychological Association (6th ed.)*. Washington, DC: American Psychological Association.
- American Psychological Association. (2012a). Guidelines for psychological practice with lesbian, gay, and bisexual clients. *American Psychologist*, 67(1), 10-42.
- American Psychological Association. (2012b). Guidelines for assessment of and intervention with persons with disabilities. *American Psychologist*, 67(1), 43-62.
- Americans with Disabilities Act of 1990. (1990). *42 U.S.C. § 12101 Public Law No. 101-336*. Retrieved from [http://thomas.loc.gov/cgi-bin/bdquery/L?d101:/list/bd/d101pl.lst:336\(Public\\_Laws\)](http://thomas.loc.gov/cgi-bin/bdquery/L?d101:/list/bd/d101pl.lst:336(Public_Laws))
- Anderson, J., Boyle, C. & Deppeler, J. (2014). The ecology of inclusive education. In H. Zhang, P. W. K. Chan and C. Boyle (Eds.), *Equality in education: Fairness and inclusion* (pp. 23-34). Rotterdam: Sense Publishers.
- Armstrong, D. (2005) Reinventing “inclusion”: New Labour and the cultural politics of special education. *Oxford Review of Education*, 31(1), 135-151.
- Arndt, S. A., Konrad, M., & Test, D. W. (2006). Effects of the self-directed IEP on student participation in planning meetings. *Remedial and Special Education*, 27(4), 194-207.

- Artiles, A. (2011). Toward an interdisciplinary understanding of educational equity and difference: The case of the racialization of ability. *Educational Researcher*, 40(9), 431-445. Retrieved from <http://www.jstor.org.ezproxy.lib.monash.edu.au/stable/41302985>
- Artiles, A. J., & Kozleski, E. B. (2016). Inclusive education's promises and trajectories: Critical notes about future research on a venerable idea. *Education Policy Analysis Archives*, 24(43). Retrieved from [http://dx.doi.org/10,14507/epaa.24.1919](http://dx.doi.org/10.14507/epaa.24.1919)
- Artiles, A. J., Harris-Murri, N. & Rostenberg, D. (2006). Inclusion as social justice: Critical notes on discourses, assumptions and the road ahead. *Theory into Practice*, 45(3), 260-268.
- Asch, A., & McCarthy, H. (2003). Infusing disability issues into the psychology curriculum. In P. Bronstein & K. Quina (Eds.), *Teaching gender and multicultural awareness* (2nd ed.), (pp. 253-269). Washington, DC: American Psychological Association.
- Augestad, L. B., & Jiang, L. (2015). Physical activity, physical fitness, and body composition among children and young adults with visual impairments: A systematic review. *British Journal of Visual Impairment*, 33(3), 167-182.
- Australian Association of Christian Schools. (AACS). (2015). *Submission to the 2015 Review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/node/40346>
- Australian Association of Special Education. (2007). *Position paper on teacher aides*. Retrieved from <http://aase.edu.au/wp-content/uploads/documents/Teacher-Aide-Position-Paper.pdf>
- Australian Blindness Forum. (ABF). (2008). *Improving life for people who are blind or vision impaired: Education and children's services*. Retrieved from [www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc](http://www.australianblindnessforum.org.au/Policy/ABF%20Education%20Childrens%20Service%20policy%20final%20230408.doc)
- Australian Bureau of Statistics. (2014). *Profile of disability, Australia, 2009*. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4429.0main+features100302009>
- Australian Curriculum. (2015). *Student Diversity*. Retrieved from <https://www.australiancurriculum.edu.au/studentdiversity/students-with-disability>

- Australian Curriculum and Assessment Reporting Authority (ACARA). (2013). *The shape of the Australian curriculum*. Retrieved from [http://www.acara.edu.au/verve/\\_resources/the\\_shape\\_of\\_the\\_Australian\\_curriculum\\_v4.pdf](http://www.acara.edu.au/verve/_resources/the_shape_of_the_Australian_curriculum_v4.pdf)
- Australian Curriculum and Assessment Reporting Authority (ACARA). (2013). *Student diversity and the Australian curriculum*. Retrieved from <http://firstforlasts.weebly.com/uploads/2/8/1/8/28187041/studentdiversity.pdf>
- Australian Curriculum Assessment and Reporting Authority (ACARA). (2016). *NAPLAN National assessment program*. Retrieved from <https://www.nap.edu.au/>
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2012). *Curriculum, assessment and reporting in special educational needs and disability: A thematic overview of recent literature*. Retrieved from [http://www.acara.edu.au/\\_resources/ACARA\\_Research\\_for\\_Publication\\_Final.pdf](http://www.acara.edu.au/_resources/ACARA_Research_for_Publication_Final.pdf).
- Australian Government Department of Education and Training. (2016). *Disability standards for education 2005: 2015 review submissions, Vision Australia*. Retrieved from <https://education.gov.au/2015-review-submissions>
- Australian Government Department of Education. (2015). *What is the nationally consistent collection of data for school students with disability?* Retrieved from <http://education.gov.au/what-nationally-consistent-collection-data-school-students-disability>
- Australian Institute for Teaching & School Leadership (AITSL). (2013). *Initial teacher education: Data report*. Melbourne: Education Services Australia. Retrieved from <http://www.aitsl.edu.au/initialteacher-education/initial-teacher-education.html>
- Australian Qualifications Framework. (2013). *AQF Second Edition 2013*. Retrieved from <http://www.aqf.edu.au/> <http://www.aqf.edu.au/wp-content/uploads/2013/05/AQF-2nd-Edition-January-2013.pdf>
- Australian Research Alliance for Children and Youth (ARACY). (2013). *Inclusive education for students with disability*. Retrieved from [http://www.aracy.org.au/publications-resources/command/download\\_file/id/246/filename/Inclusive\\_education\\_for\\_students\\_with\\_disability\\_-\\_A\\_review\\_of\\_the\\_best\\_evidence\\_in\\_relation\\_to\\_theory\\_and\\_practice.pdf](http://www.aracy.org.au/publications-resources/command/download_file/id/246/filename/Inclusive_education_for_students_with_disability_-_A_review_of_the_best_evidence_in_relation_to_theory_and_practice.pdf)

- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration / inclusion: A review of the literature. *European Journal of Special Needs Education, 17*(2), 129-147.
- Bachor, D.G., & Crealock, C. (1986). *Instructional strategies for students with special needs*. Toronto: Prentice.
- Bardin, J. A., & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness, 102*, 472-483.
- Barnes, C. (2010). A brief history of discrimination and disabled people. In L. J. Davis (Ed.), *The disability studies reader* (pp. 20-32). New York, NY: Routledge.
- Barnes, C. (2012). The social model of disability: Valuable or irrelevant? In N. Watson, A. Roulstone & C. Thomas (Eds.), *The Routledge handbook of disability studies* (pp. 12-29). London, UK: Routledge.
- Barnes, D. R. (1992). *From communication to curriculum*. Boynton/Cook.
- Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review, 23*(2), 165-174.
- Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology, 98*, 291-231.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529.
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*(1), 1-44.
- Bausch, M. E., & Ault, M. J. (2008). Assistive technology implementation plan: A tool for improving outcomes. *Teaching exceptional children, 41*(1), 6-14.
- Bayram, G. İ., Corlu, M. S., Aydm, E., Ortaçtepe, D., & Alapala, B. (2015). An exploratory study of visually impaired students' perceptions of inclusive mathematics education. *British Journal of Visual Impairment, 33*(3), 212-219.

- Beamish, W., & Brown, J. E. (2012). The changing role and practice of teachers of students with visual impairments: Practitioners' views from Australia. *Journal of Visual Impairment & Blindness*, 106(2), 81-92.
- Bell, J., Corn, A., Jose, R., Perez, A., Wall, R., & Wilcox, K. (2002). An initial study of reading and comprehension rates for students who received optical devices. *Journal of Visual Impairment & Blindness* 96, 322-334.
- Benavot, A. (2012). Policies toward quality education and student learning: Constructing a critical perspective. *Innovation: The European Journal of Social Science Research*, 25(1), 67-77.
- Berg, D. H., & Schneider, C. (2012). Equality dichotomies in inclusive education: Comparing Canada and France. *ALTER - European Journal of Disability Research* 6(2), 124-134. doi: <http://dx.doi.org/10.1016/j.alter.2012.02.011>
- Biggerstaff, D. L., & Thompson, A. R. (2008). *Qualitative Research in Psychology* 5, 173-183.
- Biklen, D. (2000). Constructing inclusion: Lessons from critical, disability narratives. *International Journal of Inclusive Education*, 4(4), 337-353.
- Blake, J. J., Lund, E. M., Zhou, Q., Kwok, O. M., & Benz, M. R. (2012). National prevalence rates of bully victimization among students with disabilities in the United States. *School Psychology Quarterly*, 27(4), 210-222.
- Blankenship, K., Hatlen, P., & Lohmeier, K. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment & Blindness*, 103(2), 103-112.
- Blaska, J. (1993). The power of language: Speak and write using "person first". *Perspectives on Disability*, 25-32. Retrieved from [www.uaa.alaska.edu/dss/information/upload/PeopleFirstLanguage-2.pdf](http://www.uaa.alaska.edu/dss/information/upload/PeopleFirstLanguage-2.pdf)
- Blatchford, P., Bassett, P., Brown, P., Koutsoubou, M., Martin, C., Russell, A., & Webster, R. (2009a). *Deployment and impact of support staff in schools. The impact of support staff in schools (Strand 2, wave 2)*. London, UK: Department for Children, Schools and Families. Retrieved from <http://dera.ioe.ac.uk/10818/1/DCSF-RR148.pdf>
- Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., Webster, R. (2008). *Deployment and impact of support staff in schools and the impact of the national*

- agreement (Strand 2, wave 1, 2005, 2006)*. London, UK: Department for Children, Schools and Families. Retrieved from <http://dera.ioe.ac.uk/8607/1/dcsf-rr027.pdf>
- Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2009). *Deployment and impact of support staff project. Research Brief*. Retrieved from <https://www.uvm.edu/~cdci/evolveplus/documents/DCSF-RB148.pdf>
- Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2009b). *Deployment and impact of support staff in schools: Characteristics, working conditions and job satisfaction of support staff in schools (Strand 1, waves 1-3, 2004, 2006 and 2008)*. London: Department for Children, Schools and Families. Retrieved from <http://dera.ioe.ac.uk/11058/1/DCSF-RR154.pdf>
- Blatchford, P., Russell, A., & Webster, R. (2012). *Reassessing the impact of teaching assistants: How research challenges practice and policy*. New York, NY: Routledge.
- Blatchford, P., Russell, A., Bassett, P., Brown, P., & Martin, C. (2007). The role and effects of teaching assistants in English primary schools (Years 4 to 6) 2000–2003. Results from the Class Size and Pupil–Adult Ratios (CSPAR) KS2 Project. *British Educational Research Journal*, 33(1), 5-26.
- Blatchford, P., Webster, R., & Russell, A. (2012). Challenging the role and deployment of teaching assistants in mainstream schools: The impact on schools. *Final report on findings from the Effective Deployment of Teaching Assistants (EDTA) project*. Retrieved from <http://maximisingtas.co.uk/assets/content/edtareport-2.pdf>
- Blind Citizens Australia. (2010). *Submission to the inquiry into the provision of education to students with a disability or special needs*. Retrieved from <https://www.parliament.nsw.gov.au/committees/DBAssets/InquirySubmission/Summary/45215/Submission%20552.pdf>
- Blind Citizens Australia. (2015). *Submission to the 2015 review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/system/files/doc/other/blindcitizensaustralia.pdf>
- Blind Sports Victoria. (2015). *Swish*. Retrieved from <http://blindsports.org.au/sports-2/swish/>
- Borg, J., Larsson, S., & Östergren, P. O. (2011). The right to assistive technology: For whom, for what, and by whom? *Disability & Society*, 26(2), 151-167.

- Bouck, E. C. (2010). Technology and students with disabilities: Does it solve all the problems. in F. E. Obiakor, J.P. Bakken & A.F Rotatori (Eds.), *Current Issues and Trends in Special Education: Research, Technology, and Teacher Preparation (Advances in Special Education, Volume 20)* (pp. 91-104). West Yorkshire, UK: Emerald Group Publishing Limited.
- Bourke, P., & Carrington, S. (2007). Inclusive education reform: Implications for teacher aides. *Australasian Journal of Special Education*, *31*(1), 15-24.
- Boyle, C., Topping, K., and Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools. *Teachers and Teaching*, *19*(5) 527-542.
- Brinkmann, S., & Kvale, S. (2009). Confronting the ethics of qualitative research. *Journal of Constructivist Psychology*, *18*(2), 157-181.
- Brocki J. M., & Wearden A. J. (2006). A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology and Health*, *21*(1), 87-108.
- Brodsky, M. C. (2010). *Pediatric neuro-ophthalmology*. Rochester, US: Springer.
- Bronfenbrenner, U. & Ceci, S. J. (1994). Nature-nurture reconceptualised in developmental perspective: A biological model. *Psychological Review*, *101*(4), 568-586.
- Bronfenbrenner, U. (1976). The experimental ecology of education. *Educational Researcher*, *5*(5), 5-15.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development*, Vol. 6 (pp. 187-249). Greenwich, CT: JAI Press.
- Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. Wozniak & K. Fischer (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 3-44). Hillsdale, NJ: Erlbaum.
- Bronfenbrenner, U. (1994). Ecological models of human development. In *International Encyclopedia of Education*, Vol 3, 2nd ed. Oxford: Elsevier. Reprinted in: Gauvain, M. & Cole, M. (Eds.), *Readings on the development of children*, 2nd ed. (pp. 37-43). NY: Freeman. Retrieved from <http://www.psy.cmu.edu/~siegler/35bronfenbrenner94.pdf>

- Bronfenbrenner, U. (1995). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, Jr., K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 619-647). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.
- Bronfenbrenner, U., & Morris, P. (2007). The bioecological model of human development. *Handbook of child psychology*. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/9780470147658.chpsy0114/abstract>
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental process. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol.1. Theoretical models of human development 5th ed.* (pp. 993-1028). New York, NY: John Wiley.
- Brown, C. M., Packer, T. L., & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education, 46*(4), 223 - 232.
- Brueggemann, B. J. (2013). Disability studies/disability culture. In M. L. Wehmeyer (Ed.), *Oxford handbook of positive psychology and disability* (pp. 279-299). New York, NY: Oxford University Press.
- Bryant, B. R., Bryant, D. P., Shih, M., & Seok, S. (2010). Assistive technology and supports provision: A selective review of the literature and proposed areas of application. *Exceptionality, 18*(4), 203-213.
- Bryman, A. (2012). *Social Research Methods*. Fourth edition. Oxford, UK: Oxford University Press.
- Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organisational analysis*. London, UK: Heinemann.
- Butt, R. (2016). Teacher assistant support and deployment in mainstream schools. *International Journal of Inclusive Education, 20*(9), 995-1007.
- Butt, R., & Lowe, K. (2011). Teaching assistants and class teachers: Differing perceptions, role confusion and the benefits of skills-based training. *International Journal of Inclusive Education, 16*(2), 207-219.

- Byrne, L. J. & Rickards, F. W. (2011). Listening to the voices of students with disabilities: Can such voices inform practice? *Australasian Journal of Special Education*, 35(1), 25-34.
- Cambra, C., & N. Silvestre. (2003). Students with special educational needs in the inclusive classroom: Social integration and self-concept. *European Journal of Special Needs Education* 18(2), 197-208.
- Cammarata, L. (2013). Phenomenology and hermeneutics. In C Chappelle (Ed.), *The Encyclopedia of Applied Linguistics*, (pp. 1-9). UK: Blackwell Publishing
- Campbell, D. T. (1975). Degrees of freedom and the case study. *Comparative Political Studies*, 8(2), 178-193.
- Canadian Library Association (CLA). (2000). *CLA submission to the task force on access to information of print disabled Canadians*. Retrieved from <http://www.cla.ca/top/whatsnew/wnoc20042.htm>.
- Carroll, A., Forlin, C., & Jobling, A. (2003). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher Education Quarterly*, 30(3), 65-79.
- Carter, E., O'Rourke, L., Sisco, L. G., & Pelsue, D. (2009). Knowledge, responsibilities, and training needs of paraprofessionals in elementary and secondary schools. *Remedial and Special Education*, 30(6), 344-359.
- Cassidy, E., Reynolds, F., Naylor, S., & De Souza, L (2011). Using interpretative phenomenological analysis to inform physiotherapy practice: An introduction with reference to the lived experience of cerebellar ataxia. *Physiotherapy Theory and Practice*, 27(4), 263-277.
- Cefai, C., & Cooper, P. (2010). Students without voices: The unheard accounts of secondary school students with social, emotional and behavior difficulties. *European Journal of Special Needs Education* 25(2), 183–198.
- Cervantes, C. M., & Porretta, D. L. (2013). Impact of after school programming on physical activity among adolescents with visual impairments. *Adapted Physical Activity Quarterly*, 30(2), 127-146.
- Chambers, D. (2015). The changing nature of the roles of support staff. In C. Forlin (Ed.), *Working with teaching assistants and other support staff for inclusive education*

(*International perspectives on inclusive education, Volume 4*) (pp. 3-25). West Yorkshire, UK: Emerald Group Publishing Limited.

Chambers, D. J. (2011). *Assistive technology: Effects of training on education assistants' perceptions of themselves as users and facilitators of assistive technology and consequent transfer of skills to the classroom environment* (Doctoral dissertation). University of Notre Dame Australia. Retrieved from <http://researchonline.nd.edu.au/theses/62>

Chambers, D., & Berlach, R. G. (2015). Assistive technology and teacher assistants. In C. Forlin & D. Chambers (Eds.), *International Perspectives on Inclusive Education Vol.4, Working with Teaching Assistants and Other Support Staff for Inclusive Education* (pp. 219-239). Emerald Group Publishing Limited, UK.

Chan F., Livneh H., Pruet S., Wang C.-C., Zheng L. X. (2009). Societal attitudes toward disability: Concepts, measurements, and interventions. In F. Chan, C. E. da Silva Cordoso & J.A. Chronister (Eds.), *Understanding psychosocial adjustment to chronic illness and disability: A handbook for evidence-based practitioners in rehabilitation* (pp. 333–367). New York, NY: Springer.

Children with Disability Australia (CDA). (2015). *Submission to the 2015 review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/system/files/doc/other/childrenwithdisabilityaustralia.pdf>

Christensen and F. Rizvi (Eds), *Disability and the Dilemmas of Education and Justice*. Buckingham, UK: Open University Press.

Christensen, C. (1996). Disabled, handicapped or disordered: “What’s in a name?”. In C. Christensen & F. Rizvi (Eds.), *Disability and the dilemmas of education and justice* (pp. 63–77). Buckingham, England: Open University Press.

Clare, E. (1999). *Exile & pride: Disability, queerness, and liberation (2nd ed.)*. Cambridge, MA: South End Press.

Clark, A., & Moss, P. (2011). *Listening to young children: The mosaic approach*. London, UK: NCB.

- Cochrane, G., Lamoureux, E., & Keeffe, J. (2008). Defining the content for a new quality of life questionnaire for students with low vision (the impact of vision impairment on children: IVI\_C). *Ophthalmic epidemiology*, *15*(2), 114-120.
- Commonwealth of Australia. (2015). *Final report for the 2015 review of the disability standards for education 2005*. Retrieved from <https://docs.education.gov.au/node/38936>
- Commonwealth of Australia. (2016a). *Senate Report. Access to real learning: The impact of policy, funding and culture on students with disability*. Retrieved from [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Education\\_and\\_Employment/students\\_with\\_disability/Report](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/students_with_disability/Report)
- Commonwealth of Australia. (2006). *Disabilities standards for education 2005*. Retrieved from <http://education.gov.au/disability-standards-education>
- Commonwealth of Australia. (2009). *Shut Out: The Experience of People with Disabilities and Their Families*. Retrieved from [www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/shut-out-the-experience-of-people-with-disabilities-and-their-families-in-australia](http://www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/shut-out-the-experience-of-people-with-disabilities-and-their-families-in-australia)
- Commonwealth of Australia. (2014). *Disabilities discrimination act 1992*. Retrieved from <https://www.legislation.gov.au/Details/C2014C00013>
- Commonwealth of Australia. (2016). *2015 Review submissions*. Retrieved from <https://www.education.gov.au/2015-review-submissions>
- Conroy, P. (2012). Supporting students with visual impairments in physical education. *Insight: Research and Practice in Visual Impairment and Blindness*, *5*(1), 3-10.
- Constantinescu, C. (2015). *Assistive technology use among secondary special education teachers in a private school for students with specific learning disabilities: Types, levels of use and reported barriers*. UMD Theses and Dissertations: DRUM Retrieved from <http://drum.lib.umd.edu/handle/1903/17051>
- Cook, B. G. (2004). Inclusive teachers' attitudes toward their students with disabilities: A Replication and extension. *The Elementary School Journal*, *104*(4), 307-320.
- Corcoran, K., Crusius, J., & Mussweiler, T. (2011). Social comparison: Motives, standards, and mechanisms. In D. Chadee (Ed.), *Theories in social psychology* (pp. 119-139). Oxford, UK: Wiley-Blackwell.

- Corn, A. L., & Lusk, K.E. (2010). Perspectives on low vision. In A. L. Corn & J. N. Erin (Eds.), *Foundations of low vision: Clinical and functional perspectives 2nd ed.* (pp. 3-34). New York: AFB Press.
- Corrigan, P. W. (2014). *The stigma of disease and disability: Understanding causes and overcoming injustices*. Washington, DC: American Psychological Association.
- Cox, P. R., & Dykes, M. K. (2001). Effective classroom adaptations for students with visual impairments. *Teaching Exceptional Children*, 33(6), 68-74.
- Craven, R. G., H. W. Marsh, and P. Burnett. (2003). cracking the self-concept enhancement conundrum: a call and blueprint for the next generation of self-concept enhancement research. In H. W. Marsh, R. G. Craven, & D. McInerney (Eds.), *International advances in self research, Vol. 1*, (pp. 91–126). Greenwich, CT: Information Age.
- Crocker, A. D., & Orr, R. R. (1996). Social behaviors of children with visual impairments enrolled in preschool programs. *Exceptional Children*, 62(5), 451-462.
- Crocker, J., Thompson, L. L., McGraw, K. M., & Ingerman, C. (1987). Downward comparison, prejudice, and evaluations of others: Effects of self-esteem and threat. *Journal of Personality and Social Psychology*, 52(5), 907-916.
- Crossland, M. D., Silva, R. S., & Macedo, A. F. (2014). Smartphone, tablet computer and e-reader use by people with vision impairment. *Ophthalmic and Physiological Optics*, 34(5), 552-557.
- Crouch, R., Keys, C. B., & McMahon, S. D. (2014). Student–teacher relationships matter for school inclusion: School belonging, disability, and school transitions. *Journal of Prevention & Intervention in the Community*, 42(1), 20-30.
- Cumming, J. J., & Dickson, M. (2013). Educational accountability tests, social and legal inclusion approaches to discrimination for students with disability: A national case study from Australia. *Assessment in education: Principles, policy & practice*, 20(2) 221-239.
- Curtin, M. & Clarke, G. (2005). Listening to young people with physical disabilities' experiences of education. *International Journal of Disability, Development and Education*, 52(3), 195-214.

- Curtis, K., & Reed, M. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment & Blindness, 105*(9), 548-557.
- D'Alessio, S., and Watkins, A. (2009). International comparisons of inclusive policy and practice: Are we talking about the same thing? *Research in Comparative and International Education Journal, 4*(3), 233-249.
- D'Andrea, F. M., & Siu, Y. T. (2015). Students with visual impairments: Considerations and effective practices for technology use. In *Efficacy of assistive technology interventions* (pp. 111-138). West Yorkshire, UK: Emerald Group Publishing Limited.
- Dahlberg, K. (2006). The essence of essences - the search for meaning structures in phenomenological analysis of lifeworld phenomena. *Qualitative Studies on Health and Well-being, 1*(1), 11-19.
- Dale, N., & Sonksen, P. (2002). Developmental outcome, including setback, in young children with severe visual impairment. *Developmental Medicine and Child Neurology, 44*(9), 613-622.
- Dalton, E. M., & Roush, S. E. (2010). Assistive and educational technology standards and teacher competencies in relation to evidence-based practice: Identification and classification of the literature. *Journal of Special Education Technology, 25*(2), 13-30.
- Dane-Staples, E., Lieberman, L., Ratciff, J., & Rounds, K. (2013). Bullying experiences of individuals with visual impairment: The mitigating role of sport participation. *Journal of Sport Behavior, 36*(4), 365-386.
- Dang, M. T. (2010). The history of legislation and regulations related to children with developmental disabilities: Implications for school nursing practice today. *The Journal of School Nursing, 26*(4), 252-259.
- Darling, N. (2007). Ecological systems theory: The person in the centre of the circles. *Research in Human Development, 4*(3-4), 203-217.
- Das, A. K., Gichuru, M., & Singh, A. (2013). Implementing inclusive education in Delhi, India: regular school teachers' preferences for professional development delivery modes. *Professional Development in Education, 39*(5), 698-711.

- Datta, P. (2014). Self-concept and vision impairment: A review. *British Journal of Visual Impairment*, 32(3), 200-210.
- Datta, P., & Talukdar, J. (2015). The impact of vision impairment on students' self-concept. *International Journal of Inclusive Education*, 20(6), 659-672.
- Datta, P., & Talukdar, J. (2017). The impact of support services on students' test anxiety and/or their ability to submit assignments: a focus on vision impairment and intellectual disability. *International Journal of Inclusive Education*, 21(2), 160-171.
- Davies, M. (2012). Accessibility to NAPLAN assessments for students with disabilities: a 'fair go'. *Australasian Journal of Special Education*, 36(1), 62-78.
- Davis, L. J. (2013). *The disability studies reader (4th ed.)*. New York, NY: Routledge.
- Day, J. C., & Newburger, E. C. (2002). *The big payoff: Educational attainment and synthetic estimates of work-life earnings* (Current population reports). Washington, DC: US Department of Commerce, Census Bureau. Retrieved from <http://landview.census.gov/prod/2002pubs/p23-210.pdf>
- De Boer, H., Piji, S. J. & Minnaert, A. (2011). Regular primary schoolteachers' attitude towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, 15(3), 331-353.
- de Schipper, T., Lieberman, L. J., & Moody, B. (2017). "Kids like me, we go lightly on the head": Experiences of children with a visual impairment on the physical self-concept. *British Journal of Visual Impairment*, 35(1), 55-68.
- de Valenzuela, J. S. (2014). Sociocultural Views of Learning. In L. Florian (Ed.) *The Sage Handbook of Special Education* (pp. 299-314). London, UK: S Sage Publications.
- DeCarlo, D. K., McGwin, G., Bixler, M. L., Wallander, J., & Owsley, C. (2012). Impact of pediatric vision impairment on daily life: Results of focus groups. *Optometry and Vision Science*, 89(9), 1409-1416 Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474353/>.
- Dembo, T. (1982). Some problems in rehabilitation as seen by a Lewinian. *Journal of Social Issues*, 38, 131-139.

- Dempsey, I. (2011). Trends in the proportion of students with a disability in Australian schools, 2000–2009. *Journal of Intellectual & Developmental Disability*, 36(2), 144-145.
- Dempsey, I., & Davies, M. (2013). National test performance of young Australian children with additional educational needs. *Australian Journal of Education*, 57(1), 5-18.
- Department of Education and Training (DET). (2016). *Program for students with disabilities – Operational guidelines for schools 2017*. Retrieved from <http://www.education.vic.gov.au/school/teachers/support/diversity/Pages/handbook.aspx>
- Department of Education Western Australia. (2010). *The expanded core curriculum*. Retrieved online. [det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626](http://det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en?cat-id=8024626)
- Department of Education, Employment and Workplace Relations (DEEWR). (2012). *Report on the review of disability standards for education 2005*. Retrieved from [https://docs.education.gov.au/system/files/doc/other/report\\_on\\_the\\_review\\_of\\_disability\\_standards\\_for\\_education\\_2005.pdf](https://docs.education.gov.au/system/files/doc/other/report_on_the_review_of_disability_standards_for_education_2005.pdf)
- Department of Education, Employment and Workplace Relations (DEEWR). (2011). *Review of funding for schooling: Final report*. Retrieved from <https://docs.education.gov.au/system/files/doc/other/review-of-funding-for-schooling-final-report-dec-2011.pdf>
- Deppeler, J., Forlin, C., Chambers, D., Loreman, T., & Sharma, U. (2015). Equity and quality in inclusive education in Australia: The case of students with disabilities. *Recherches and Éducatons*, 14, 49-64. Retrieved from <http://rechercheseducations.revues.org/2367>
- Department of Education and Training (DET). (2016). *Inclusive education for all students with disabilities and additional needs. The government's response to the review of the program for students with disabilities*. Retrieved from <http://www.education.vic.gov.au/Documents/about/department/PSD-Review-Response.pdf>

- Devlin, M. (2013). *eLearning Vision*. Federation University Australia. Retrieved from [https://federation.edu.au/\\_\\_data/assets/pdf\\_file/0020/159122/FedUni\\_eVision2014.pdf](https://federation.edu.au/__data/assets/pdf_file/0020/159122/FedUni_eVision2014.pdf)
- Devlin, R., & Pothier, D. (2006). Introduction: Toward a critical theory of dis-citizenship. In D. Pothier, and R. Devlin (eds.). *Critical disability theory: Essays in philosophy, politics, policy, and law*. (pp. 1-24.) Vancouver, British Columbia: UBC Press.
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: The Macmillan company.
- Dewey, J. (1957). *Outlines of a critical theory of ethics*. New York: Hillary House. (Original work published 1891).
- Dewey, J. (1958). *Experience and education*. New York: Macmillan.
- Dewey, J. (1976). Individuality, equality, and superiority. In J. A. Boydston (Ed.), *John Dewey: The middle works, 1899-1924 Vol. 13* (pp. 295-300). Carbondale: Southern Illinois University Press.
- Diez, A. M. (2010). School memories of young people with disabilities: An analysis of barriers and aids to inclusion. *Disability & Society* 25(2) 163-175.
- Digital Education Advisory Group. (2013). *Beyond the classroom: A new digital education for young Australians in the 21st century*. Retrieved from [https://docs.education.gov.au/system/files/doc/other/deag\\_final\\_report.pdf](https://docs.education.gov.au/system/files/doc/other/deag_final_report.pdf)
- Dixon, R. M. & Verenikina, I. (2007). Towards inclusive schools: An examination of socio-cultural theory and inclusive practices and policy in New South Wales DET schools. *Learning and sociocultural theory: Exploring modern Vygotskian perspectives international workshop 2007*, 1(1), 192-208. Retrieved from <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1012&context=llrg>
- Doubt, L., & McColl, M. A. (2003). A secondary guy: Physically disabled teenagers in secondary schools. *Canadian Journal of Occupational Therapy*, 70(3), 139-151.
- Douglas, G., & Hewett, R. (2014). Views of independence and readiness for employment amongst young people with visual impairments in the UK. *The Australian Journal of Rehabilitation Counselling*, 20(2), 81-99.
- Douglas, G., McLinden, M., Farrell, A. M., Ware, J., McCall, S., & Pavey, S. (2011). Access to print literacy for children and young people with visual impairment: Implications

- for policy and practice. *European Journal of Special Needs Education*, 26(1), 39-46.
- Douglas, G., McLinden, M., McCall, S., Pavey, S., Ware, J., & Farrell, A. M. (2011). Access to print literacy for children and young people with visual impairment: Findings from a review of literature. *European Journal of Special Needs Education*, 26(1), 25-38.
- Douglas, G., McLinden, M., Robertson, C., Travers, J., & Smith, E. (2016). Including pupils with special educational needs and disability in national assessment: Comparison of three country case studies through an inclusive assessment framework. *International Journal of Disability, Development and Education*, 63(1), 98-121.
- Dovidio, J. F., Pagatto, L., & Hebl, M. R. (2011). Implicit attitudes and discrimination against people with physical disabilities. In R. L. Weiner & S. L. Wilborn (Eds.), *Disability and age discrimination: Perspectives in law and psychology* (pp. 157-184). New York: Springer
- Duhaney, L. M. G., & Duhaney, D. C. (2000). Assistive technology: Meeting the needs of learners with disabilities. *International Journal of Instructional Media*, 27(4), 393-402.
- Dunn, D. S. (2015). *The social psychology of disability*. New York, NY: Oxford University Press.
- Dunn, D. S. (2016). Teaching about psychosocial aspects of disability: Emphasizing person – environment relations. *Teaching of Psychology* (43)3, 255-262.
- Dunn, D. S., & Burcaw, S. (2013). Disability identity: Exploring first person accounts of disability experience. *Rehabilitation Psychology*, 58, 148-157.
- Dunn, D. S., Fisher, D. J., & Beard, B. M. (2013). Disability as diversity rather than (in)difference: Understanding others' experiences through one's own. In D. S. Dunn, R. A. R. Gurung, K. Naufel, & J. H. Wilson (Eds.), *Controversy in the psychology classroom: Using hot topics to foster critical thinking* (pp. 209–223). Washington, DC: American Psychological Association.
- Dunn, D. S., & Andrews, E. E. (2015). Person-first and identity-first language: developing psychologists' cultural competence using disability language. *American Psychologist* 70(3), 255-264.

- Dyck, M. J., Farrugia, C., Shochet, I. M., & Holmes-Brown, M. (2004). Emotion recognition/understanding ability in hearing or vision-impaired children: Do sounds, sights, or words make the difference? *Journal of Child Psychology and Psychiatry*, 45(4), 789-800.
- Eatough, V., & Smith, J. (2006). I was like a wild wild person: Understanding feelings of anger using interpretative phenomenological analysis. *British Journal of Psychology*, 97(4), 483-498.
- Education for All Handicapped Children Act of 1975, P.L. 94-142, § 20 USC 1401. Retrieved from [www.gpo.gov/fdsys/pkg/STATUTE-89/pdf/STATUTE-89-Pg773.pdf](http://www.gpo.gov/fdsys/pkg/STATUTE-89/pdf/STATUTE-89-Pg773.pdf)
- Elksnin, L., & Elksnin, N. (2006). *Teaching social-emotional skills at school and home*. Denver, CO: Love Publishing.
- Elliott, J. (2005). *Using narrative in social research: Qualitative and quantitative approaches*. London, UK: Sage Publications.
- Elliott, R., & Timulak, L. (2005). Descriptive and interpretive approaches to qualitative research. In J. Miles & P. Gilbert (Eds.), *A handbook of research methods for clinical and health psychology* (pp. 147-159). Oxford, UK: Oxford University Press.
- Ely, M. S. (2014). Effective strategies for preschool peer group entry: Considered applications for children with visual impairments. *Journal of Visual Impairment & Blindness*, 108(4), 287-297.
- Espelage, D. L., & Colbert, C. L. (2016). School-Based interventions to prevent bullying and promote pro-social behaviors. *Handbook of Social Influences in School Contexts: Social-Emotional, Motivation, and Cognitive Outcomes*, 402-422.
- Espelage, D. L. (2016). Leveraging school-based research to inform bullying prevention and policy. *American Psychologist* 71(8), 768-775.
- Evans, C., J. Williams, & D. Metcalf. (2010). Using high- and low-technology tools to enhance self- and peer assessment and feedback for preservice teachers. *Journal of Special Education* 25(4), 55-60.
- Fade, S. (2004). Using interpretative phenomenological analysis for public health nutrition and dietetic research: A practical guide. *Proceedings of the Nutrition Society*, 63(4), 647-653.

- Farmer, T., Wike, T. L., Alexander, Q. R., Rodkin, P. C., & Mehtaji, M. (2015). Students with disabilities and involvement in peer victimization: Theory, research, and considerations for the future. *Remedial and Special Education, 36*(5), 263-274.
- Farrell, P. (2000). The impact of research on developments in inclusive education. *International Journal of inclusive education, 4*(2), 153-162.
- Farrell, P., A. Alborz, A. Howes, & D. Pearson. (2010). The impact of teaching assistants on improving pupils' academic achievement in mainstream schools: A review of the literature. *Educational Review 62*(4), 435-448.
- Fenwick, L. (2011). Curriculum reform and reproducing inequality in upper-secondary education. *Journal of Curriculum Studies, 43*(6), 697-716.
- Ferguson, D. L. (2008). International trends in inclusive education: The continuing challenge to teach each one and everyone. *European Journal of Special Needs Education, 23*(2), 109-120.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*(2), 117-140.
- Field, S., Sarver, M. D., & Shaw, S. F. (2003). Self-determination: A key to success in postsecondary education for students with learning disabilities. *Remedial and Special Education, 24*, 339-349.
- Finlay, L. (2008). A Dance Between the Reduction and Reflexivity: Explicating the "Phenomenological Psychological Attitude". *Journal of Phenomenological Psychology, 39*(1), 1-32.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of "seeing afresh." *Journal of Humanistic Psychology, 53*(2), 172-201.
- Finlay, L. (2014). Engaging phenomenological analysis. *Qualitative Research in Psychology, 11*(2), 121-141.
- Fisher, M., & Pleasants, S. L. (2012). Roles, responsibilities, and concerns of paraeducators: Findings from a statewide survey. *Remedial and Special Education, 33*(5), 287-297.
- Fiske, S. T., & Taylor, S. E. (2013). *Social cognition: From brains to culture (2nd ed.)*. Thousand Oaks, CA: Sage.

- Fitts, W. H., and W. L. Warren. (2003). *Tennessee Self-concept Scale Manual. 2nd ed.* Los Angeles, CA: Western Psychological Services.
- Flanagan, S., Bouck, E. C. & Richardson, J. (2013). Middle school special education teachers' perceptions and use of assistive technology in literacy instruction. *Assistive Technology, (25)1*, 24-30.
- Fleer, M. (2011). Technologically constructed childhoods: Moving beyond a reproductive to a productive and critical view of curriculum development. *Australasian Journal of Early Childhood, 36(1)*, 16-24.
- Florian, L. (2012). Preparing teachers to work in inclusive classrooms: Key lessons for the professional development of teacher educators from Scotland's inclusive practice project. *Journal of Teacher Education, 63(4)*, 275-285.
- Foreman, P (2005). Language and disability. *Journal of Intellectual & Developmental Disability 30(1)*, 57-59.
- Foreman, P. (2011). Introducing inclusion in education. In P. Foreman (Ed.), *Inclusion in action 3rd ed.* (pp. 2-34). Australia: Cengage.
- Forlin, C. (2001). The role of the support teacher in Australia. *European Journal of Special Needs Education, 16(2)*, 121-131.
- Forlin, C., & Chambers, D. (2011). Teacher preparation for inclusive education: Increasing knowledge but raising concerns. *Asia - Pacific Journal of Teacher Education, 39(1)*, 17-32.
- Forlin, C., & Lian, M-G. J. (Eds.) (2008). *Reform, inclusion and teacher education: Towards a new era of special education in the Asia-Pacific region.* London, UK: Routledge.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J. & Sharma, U. (ARACY). (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice.* Braddon, ACT: Australian Research Alliance for Children and Youth. Retrieved from <https://www.aracy.org.au/publications-resources/area?command=record&id=186>
- Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian Context. *International Journal of Disability, Development and Education, 55(3)*, 251-264.

- Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, 13(2), 195-209.
- Foucault, M. (1982). The subject and power. *Critical Inquiry*, 8(4), 777-779.
- Fox, C. L., & Boulton, M. J. (2005). The social skills problems of victims of bullying: Self, peer and teacher perceptions. *British Journal of Educational Psychology*, 75(2), 313-328.
- Fox, C. L., & Boulton, M. J. (2006). Longitudinal associations between submissive/non-assertive social behaviour and different types of peer victimization. *Violence and Victims*, 21, 383-400.
- Fraser, N. (1997). *Justice interruptus*. New York: Routledge.
- French, N. K. (2003). Paraeducators in special education programs. *Focus on Exceptional Children*, 36(2), 1-16.
- Friend, M., & Bursuck, W. D. (2009). *Including students with special needs: A practical guide for classroom teachers* (5th ed.). Upper Saddle River, NJ: Pearson Education.
- Gadamer, H. G. (2002). Elements of a theory of hermeneutic experience. *Truth and method*, (pp. 265-375). UK: Cambridge University Press.
- Gadamer, H-G. (1975). *Truth and method* (2nd ed.). Sheed & Ward: London. (Originally published in German in 1965).
- Garcia, S. M., Tor, A., & Gonzalez, R. (2006). Ranks and rivals: A theory of competition. *Personality and Social Psychology Bulletin*, 32(7), 970-982.
- Garcia, S. M., Tor, A., & Schiff, T. M. (2013). The psychology of competition: A social comparison perspective. *Perspectives on Psychological Science*, 8(6), 634-650.
- Gearing, R. E. (2004). Bracketing in research: A typology. *Qualitative Health Research*, 14(10), 1429-1452.
- George, A. L., and Duquette, C. (2006). The psychosocial experiences of a student with low vision. *Journal of Visual Impairment & Blindness*, 100(3), 152-163.
- Gest, S. D., Rulison, K. L., Davidson, A. J., & Welsh, J. A. (2008). A reputation for success (or failure): The association of peer academic reputations with academic self-

- concept, effort, and performance across the upper elementary grades. *Developmental Psychology*, 44(3), 625-636.
- Ghosh, R., & Galczynski, M. (Eds.). (2014). *Redefining multicultural education: Inclusion and the right to be different* (3rd ed.). Toronto, Canada: Canadian Scholars' Press.
- Giangreco, M. F. (2010a). One-to-one paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong? *Intellectual and Developmental Disabilities*, 48(1), 1-13.
- Giangreco, M. F. (2010b). Utilization of teacher assistants in inclusive schools: Is it the kind of help that helping is all about? *European Journal of Special Needs Education*, 25(4), 341-345.
- Giangreco, M. F. (2013). Teacher assistant supports in inclusive schools: Research, practices and alternatives. *Australasian Journal of Special Education*, 37(2), 93-106.
- Giangreco, M. F., & Doyle, M. B. (2007). Teacher assistants in inclusive schools. *The Sage handbook of special education*, 429-439.
- Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological Consultation*, 20(1), 41-57.
- Giangreco, M. F., Broer, S. M., & Suter, J. C. (2011). Guidelines for selecting alternatives to overreliance on paraprofessionals: Field-testing in inclusion-oriented schools. *Remedial and Special Education*, 32(1), 22-38.
- Giangreco, M. F., Dennis, R., Cloninger, C., Edelman, S., & Schattman, R. (1993). "I've counted Jon": Transformational experiences of teachers educating students with disabilities. *Exceptional Children*, 59(4), 359-372.
- Gibson, D., Paatsch, L., and Toe. (2016). An analysis of the role of teachers' aides in a state secondary school: Perceptions of teaching staff and teachers' aides, *Australasian Journal of Special Education*, 40(1), 1-20.
- Gibson, S., & Kendall, L. (2010). Stories from school: Dyslexia and learners' voices on factors impacting on achievement. *Support for learning*, 25(4), 187-193.
- Giles, D. E., & Eyler, J. (1994). The Theoretical Roots of Service-Learning in John Dewey: Toward a Theory of Service-Learning. *Michigan Journal of Community Service*

- Learning*, 1(3), 77-85. Retrieved from  
<http://digitalcommons.unomaha.edu/slceslgen/150>
- Giorgi, A. (1986). Theoretical justification for the use of descriptions in psychological research. In P. D. Aschworth, A. Giorgi, & A. J. J. de Koning (Eds.), *Qualitative Research in Psychology* (pp. 3-22). Pittsburgh, PA: Duquesne University Press.
- Giorgi, A. (2009). *The descriptive phenomenological method in psychology: A modified Husserlian approach*. Pittsburgh, PA: Duquesne University Press.
- Giorgi, A. (2012). The descriptive phenomenological psychological method. *Journal of Phenomenological psychology*, 43(1), 3-12.
- Giorgi, A., and Giorgi, B. (2003). The descriptive phenomenological psychological method. In P. M. Camic, J.E. Rhodes, and L. Yardley, (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp. 243-273). Washington, DC: American Psychological Association.
- Glaser, B. G., Strauss, A. L., & Strutzel, E. (1968). The discovery of grounded theory: strategies for qualitative research. *Nursing research*, 17(4), 364.
- Gluckman, M. (1961). Ethnographic data in British social anthropology. *The Sociological Review*, 9(1), 5-17.
- Goldberg, R. J., Higgins, E. L., Raskind, M. H., & Herman, K. L. (2003). Predictors of Success in Individuals with Learning Disabilities: A Qualitative Analysis of a 20-Year Longitudinal Study. *Learning Disabilities Research & Practice*, 18(4), 222-236.
- Gompel, M., J. van Bon, W., & Schreuder, R. (2004). Reading by children with low vision. *Journal of Visual Impairment & Blindness* 98(2), 77-89.
- Goodenow, C. (1993a) Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence*. 13(1), 21-43.
- Goodenow, C. (1993b) The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*. 30(1), 70-90.
- Goodley, D. (2011). *Disability studies: An interdisciplinary introduction*. Thousand Oaks, CA: Sage.
- Goodley, D., & Runswick-Cole, K. (2011). Problematizing policy: Conceptions of ‘child’,

- 'disabled' and 'parents' in social policy in England. *International Journal of Inclusive Education*, 15(1), 71-85.
- GOV.UK. (2015). *Inclusive language: Words to use and avoid when writing about disability*. Retrieved from <https://www.gov.uk/government/publications/inclusive-communication/inclusive-language-words-to-use-and-avoid-when-writing-about-disability>
- Greene, J. P. (2000). *The cost of remedial education: How much Michigan pays when students fail to learn basic skills*. Midland, MI: Mackinac Center for Public Policy.
- Griffin-Shirley, N., & Nes, S. L. (2005). Self-esteem and empathy in sighted and visually impaired preadolescents. *Journal of Visual Impairment & Blindness*, 99(5), 276-285.
- Griffin-Shirley, N., Parker, A. T., Smith, D. W., & Zhou, L. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105(9), 533-539.
- Grima-Farrell, C. R., Bain, A., & McDonagh, S. H. (2011). Bridging the research-to-practice gap: A review of the literature focusing on inclusive education. *Australasian Journal of Special Education*, 35(2), 117-136.
- Grimmett, E. S., Pogrund, R., & Griffin-Shirley, N. (2011). A national study of parents' perspectives on dual-certified vision professionals. *Journal of Visual Impairment & Blindness* 105(4) 211-221.
- Guay, F., Roy, A., & Valois, P. (2017). Teacher structure as a predictor of students' perceived competence and autonomous motivation: The moderating role of differentiated instruction. *British Journal of Educational Psychology*, 87(2), 224-240.
- Guerette, A. R., Lewis, S., & Mattingly, C. (2011). Students with low vision describe their visual impairments and visual functioning. *Journal of Visual Impairment & Blindness*, 105(5), 287-298.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82.
- Guide Dogs Australia. (2016). *Policy and Advocacy priorities*. Retrieved from [http://www.guidedogsaustralia.com/images/GDA\\_Policy\\_Priorities.pdf](http://www.guidedogsaustralia.com/images/GDA_Policy_Priorities.pdf)

- Guide Dogs Victoria. (2016). *Maximise your independence*. Retrieved from <https://www.guidedogsvictoria.com.au/>
- Hadley, A. M., Hair, E. C., & Moore, K. A. (2008). Assessing what kids think about themselves: A guide to adolescent self-concept for out-of-school time program practitioners. *Child Trends*, 32, 1-6.
- Haegele, J. A., & Porretta, D. (2015). Physical activity and school-age individuals with visual impairments: A literature review. *Adapted Physical Activity Quarterly*, 32(1), 68-82.
- Haegele, J. A., Zhu, X., & Davis, S. (2016). The meaning of physical education and sport among elite athletes with visual impairments. *European Physical Education Review*, 1356336X16650122. Retrieved from <http://metatoc.com/papers/58680-the-meaning-of-physical-education-and-sport-among-elite-athletes-with-visual-impairments>
- Hague, C., & Payton, S. (2010). *Digital literacy across the curriculum*. Bristol, UK: Futurelab.
- Halder, S., and P. Datta. (2012). An exploration into self-concept: a comparative analysis between the adolescents who are sighted and blind in India. *British Journal of Visual Impairment* 30(1), 31-41.
- Halling, S. (2002). Making phenomenology accessible to a wider audience. *Journal of Phenomenological Psychology*, 33(1), 19-38.
- Hardy, I., & Woodcock, S. (2015). Inclusive education policies: Discourses of difference, diversity and deficit. *International Journal of Inclusive Education*, 19(2), 141-164.
- Hargreaves, A., Earl, L., & Ryan, J. (1996). *Schooling for change: Reinventing education for early adolescents*. Bristol, PA: Falmer.
- Harpur, P. (2012). Embracing the new disability rights paradigm: The importance of the Convention on the Rights of Persons with Disabilities. *Disability & Society*, 27(1), 1-14.
- Harris, L. R., & Aprile, K. T. (2015). 'I can sort of slot into many different roles': Examining teacher aide roles and their implications for practice. *School Leadership & Management*, 35(2), 140-162.
- Hartup, W. W. (1993). Adolescents and their friends. *New Directions for Child and Adolescent Development*, 60(1), 3-22.

- Hatlen, P. (1996). The core curriculum for blind and visually impaired students, including those with additional disabilities. *RE: view*, 28(1), 25-32.
- Hatlen, P. (2004). Is social isolation a predictable outcome of inclusive education? *Journal of Visual Impairment & Blindness* 98(11), 676-678.
- Hay, J. (2012). The dilemma of a theoretical framework for the training of education support services staff within inclusive education. *Journal for New Generation Sciences*, 10(2), 92-105.
- Heidegger, M. (1962). *Being and time*. Oxford: Blackwell (Original work published in 1927).
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley.
- Hess, I. (2010). Visually impaired pupils in mainstream schools in Israel. *British Journal of Visual Impairment*, 28(1), 19-33.
- Higgins, N., & Ballard, K. (2000). Like everybody else? What seven New Zealand adults learned about blindness from the education system. *International Journal of Inclusive Education*, 4(2), 163-178.
- Hilberg, R. S. & Tharp, R. G. (2002). *Theoretical perspectives, research findings, and classroom implications of the learning styles of American Indian and Alaska Native students* [electronic version]. ERIC Clearinghouse on Rural Education and Small Schools. Retrieved from <http://www.ericdigests.org/2003-3/alaska.htm>
- Hodkinson, A. (2012). Illusionary inclusion—what went wrong with New Labour's landmark educational policy? *British Journal of Special Education*, 39(1), 4-11.
- Hoepft, M. C. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*, 9(1). Retrieved from <http://scholar.lib.vt.edu/ejournals/JTE/v9n1/hoepfl.html>.
- Hogan, Lyndall McLellan, Adrian Bauman, A. (2000). Health promotion needs of young people with disabilities—a population study. *Disability and Rehabilitation*, 22(8), 352-357.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71(2), 165-179.

- Horwood, J., Waylen, A., Herrick, D., Williams, C., & Wolke, D. (2005). Common visual defects and peer victimization in children. *Investigative Ophthalmology & Visual Science*, 46(4), 1177–1181.
- Houghton, C., Casey, D., Shaw, D. & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, 20(4), 12-17.
- Houwen, S., Hartman, E., & Visscher, C. (2010). The relationship among motor performance, physical fitness, and body composition in children with and without visual impairment. *Research Quarterly for Exercise & Sport*, 81(3), 290-299.
- Howard, R., & Ford, J. (2007). The roles and responsibilities of teacher aides supporting students with special needs in secondary school settings. *Australasian Journal of Special Education*, 31(1), 25-43.
- Hsin, C. T., Li, M. C., & Chin-Chung, T. (2014). The influence of young children's use of technology on their learning: A review. *Journal of Educational Technology & Society*, 17(4), 85-99.
- Humphrey, N., & Lewis, S. (2008). Make me normal. The views and experiences of pupils on the autistic spectrum in mainstream secondary schools. *Autism*, 12(1), 23-46.
- Hunt, P. F. (2011). Salamanca Statement and IDEA 2004: Possibilities of practice for inclusive education. *International Journal of Inclusive Education*, 15(4), 461-476.
- Husserl, E. (1962). *Ideas: General introduction to pure phenomenology* (W. R. B. Gibson, Trans.). New York: Collier Books. (Original work published 1931).
- Husserl, E. (1977). *Phenomenological psychology: Lectures, summer semester 1925* (J. Scanlon, Trans.). The Hague: Martinus Nijhoff. (Original work published 1962).
- Husserl, E. (1999). *The essential Husserl: Basic writings in transcendental phenomenology*. Bloomington, Indiana: Indiana University Press.
- Huurre, T. M & Aro, H. M. (2000). The psychosocial well-being of Finnish adolescents with visual impairments versus those with chronic conditions and those with no disabilities. *Journal of Visual Impairment & Blindness*, 94(10), 625-637.
- Huurre, T. M., & Aro, H. M. (1998). Psychosocial development among adolescents with visual impairment. *European Child & Adolescent Psychiatry*, 7(2), 73-78.

- Hyerle, D. (2008). Thinking maps: Visual tools for activating habits of mind. *Learning and Leading with Habits of Mind*. ASCD. Retrieved from [http://mcoe.edu.my/Uploads/WMSTC2013\\_habits\\_of\\_mind.pdf](http://mcoe.edu.my/Uploads/WMSTC2013_habits_of_mind.pdf)
- Hyerle, D. (2009). *Visual Tools for Transforming Information into Knowledge*. Thousand Oaks, CA: Corwin Press.
- Hymel, S., & Swearer, S. M. (2015). Four decades of research on school bullying: An introduction. *American Psychologist*, 70(4), 293-299.
- Hyvärinen, L. (2000). Visual evaluation of infants and children. In B. Silverstone, M. Lang, B. Rosenthal & E. Faye (Eds.). *The Lighthouse handbook on vision impairment and vision rehabilitation* (pp.799-820). Oxford, UK: Oxford University Press.
- IDEIA. (2004). 20 U. S. Code 1401 – Definitions (1) assistive technology device. Retrieved from <https://www.law.cornell.edu/uscode/text/20/1401>
- Inclusion International. (2009). *Better education for all*. Retrieved from <http://inclusion-international.org/better-education-for-all/>
- Individuals with Disabilities Education Act. (2004). *P. L. 108-446*. Retrieved from <https://www2.ed.gov/policy/speced/leg/idea/idea.pdf>
- Insight. (2014). *Education centre for the blind and vision impaired*. Retrieved from <http://www.insightvision.org.au/>
- Insight Education Centre for the Blind and Vision Impaired. (2015). *Submission to the 2015 Review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/node/40446>
- Irving, M. M., Nti, M., & Johnson, W. (2007). Meeting the Needs of the Special Learner in Science. *International Journal of Special Education*, 22(3), 109-118.
- Isberg, R. S., Hauser, S. T., Jacobson, A. M., Powers, S. I., Noam, G., Weiss-Perry, B., & Fullansbee, D. (1989). Parental contexts of adolescent self-esteem: A developmental perspective. *Journal of Youth and Adolescence* 18(1), 1-23.
- Jackson, R. (2008). Inclusion or segregation for children with an intellectual impairment: What does the research say. *Queensland Parents for People with a Disability*, 1-29. Retrieved from

<http://www.ohchr.org/Documents/Issues/Disability/StudyEducation/NGOs/AustraliaNationalCouncilIntellectualDisability2.pdf>

- Jacobson, W. H. (2012). *The art and science of teaching orientation and mobility to persons with visual impairments* (2nd ed.). New York: American Foundation for the Blind.
- Jarvis, J. M., Bell, M., & Sharp, K. (2016). Leadership for differentiation: An appreciative inquiry of how educational leadership shapes pedagogical change. *Leading and Managing*, 22(1), 75-91.
- Jensen, M. E., Pease, E. A., Lambert, K., Hickman, D. R., Robinson, O., McCoy, K. T., King, J. K. (2013). Championing person-first language: A call to psychiatric mental health nurses. *Journal of the American Psychiatric Nurses Association*, 19(3), 146-151.
- Jernigan, K (2009). The pitfalls of political correctness: euphemisms excoriated. *Braille Monitor* 52(3) Retrieved from <https://nfb.org/images/nfb/publications/bm/bm09/bm0903/bm090308.htm>
- Jessup, G. M., Bundy, A. C., Broom, A., & Hancock, N. (2017). The social experiences of high school students with visual impairments. *Journal of Visual Impairment & Blindness*, 111(1) 5-15.
- Jones, M. G., Minogue, J., Oppewal, T., Cook, M. P., & Broadwell, B. (2006). Visualizing without vision at the microscale: Students with visual impairments explore cells with touch. *Journal of Science Education and Technology*, 15(5-6), 345-351.
- Jones, P. (2005). Teachers' understandings of their pupils with profound and multiple learning difficulties. *European Journal of Special Needs Education*, 20(4), 375-385.
- Jones, P. (2013). Whose insider perspectives count and why should we consider them? In P. Jones (Ed.), *Bringing insider perspectives into inclusive teacher learning: Potentials and challenges for educational professionals*, (pp. 1-8). Hoboken, NJ: Taylor and Francis.
- Jones, P., White, J. M., Fauske, J. R., & Carr, J. F. (2011). *Leading for Inclusion*. New York, NY: Teachers College Press.
- Jones, S. R. (1996). Toward inclusive theory: Disability as social construction. *NASPA Journal*, 33(4), 347-354.

- Jordan, A., Glenn, C., & McGhie-Richmond, D. (2010). The supporting effective teaching (set) project: The relationship of inclusive teaching practices to teachers' beliefs about disability and ability, and about their roles as teachers. *Teaching and Teacher Education, 26*(2), 259-266.
- Kagohara, D. M., van der Meer, L., Ramdoss, S., O'Reilly, M. F., Lancioni, G. E., Davis, T. N., ... & Green, V. A. (2013). Using iPods® and iPads® in teaching programs for individuals with developmental disabilities: A systematic review. *Research in developmental disabilities, 34*(1), 147-156.
- Kamei-Hannan, C., Howe, J., Herrere, R. R., & Erin, J. N. (2012). Perceptions of teachers of students with visual impairments regarding assistive technology: A follow-up study to a university course. *Journal of Visual Impairment & Blindness, 106*(10), 666-678.
- Kanu, Y. (2002). In their own voices: First nations students identify some cultural mediators of their learning in the formal school system. *Alberta Journal of Educational Research 48*(2), 98–121.
- Kapperman, G., Sticken, J., & Heinze, T. (2002). Survey of the use of assistive technology by Illinois students who are visually impaired. *Journal of Visual Impairment & Blindness, 96*(2), 106-108.
- Kaukiainen, A., (2002). Anti-bullying intervention: Implementation and outcome. *British Journal of Educational Psychology, 75*(3), 465-487.
- Kay, E., & Kingston, H. (2002). Feelings associated with being a carrier and characteristics of reproductive decision making in women known to be carriers of X-linked conditions. *Journal of Health Psychology, 7*(2), 169-181.
- Kef, S. (2002). Psychosocial adjustments and the meaning of social support for visually impaired adolescents. *Journal of Visual Impairment & Blindness, 96*(1), 22-37.
- Kelley, D., Finley, R., Koehler, K., & Picard, K. (2001). Equal access: Integrating technology into the elementary and secondary curriculum. *Re:View, 33*(2), 63-69.
- Kelley, H. H. (1973). The processes of causal attribution. *American psychologist, 28*(2), 107-128.
- Kelly, S. M. (2009). Use of assistive technology by students with visual impairments: Findings from a national survey. *Journal of Visual Impairments and Blindness, 103*(8), 470-480.

- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment & Blindness*, 105(4), 235-239.
- Kelly, S. M. (2015). Role of Vision Specialists in Special Services. In F. E. Obiakor & J. P. Bakken (Eds.), *Interdisciplinary connections to special education: Key related professionals involved (Advances in Special Education, Volume 30B)*, (pp. 197-211). Emerald Group Publishing Limited.
- Kelly, S. M. (2016). Inclusion and Students with Visual Impairments. In J. P. Bakken & F. E. Obiakor (Eds.), *General and Special Education Inclusion in an Age of Change: Impact on Students with Disabilities* (pp. 95-111). Emerald Group Publishing Limited.
- Kelly, S. M., & Smith, D. W. (2011). The impact of assistive technology on the educational performance of students with visual impairments: A synthesis of the research. *Journal of Visual Impairment & Blindness*, 105(2), 73-83.
- Kelly, S. M., & Wolffe, K. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment & Blindness*, 105(6), 340-349.
- Kelly, S. M. (2009). The use of assistive technology by students with visual impairments: Findings from a national survey. *Journal of Visual Impairment & Blindness*, 103(8), 470-480.
- Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment & Blindness*, 105(4), 235-239.
- Khadka, J., Ryan, B., Margrain, T. H., Woodhouse, J. M., & Davies, N. (2012). Listening to voices of children with a visual impairment: A focus group study. *British Journal of Visual Impairment*, 30(3), 182-196.
- Kinderman, T. A. (1993). Natural peer groups as contexts for individual development: The case of children's motivation in school. *Developmental Psychology*, 29(6), 970-977.
- King-Sears, M. E., & Evmenova, A. S. (2007). Premises, principles, and processes for integrating technology into instruction. *Teaching Exceptional Children*, 40(1), 6-14.

- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*, 262 - 273.
- Knox, S., & Burkard, A. W. (2009). Qualitative research interviews. *Psychotherapy Research, 19*(4), 566-575.
- Kondrat, D. C., & Teater, B. (2009). An anti-stigma approach to working with persons with severe mental disability: Seeking real change through narrative change. *Journal of Social Work Practice, 23*(1), 35-47.
- Koomen, M. H. (2016). Inclusive science education: Learning from wizard. *Cultural Studies of Science Education, 11*(2), 293-325.
- Koutantos, D., & Koutantos, D. (2000). A survey of children with VIMI in special schools in Crete. *British Journal of Visual Impairment, 18*(2), 73-77.
- Kumar, D. D., Ramasamy, R., & Stefanich, G. P. (2001). Science for students with visual impairments: Teaching suggestions and policy implications for secondary educators. *Electronic Journal of Science Education 5*(3). Retrieved from <http://ejse.southwestern.edu/article/view/7658/5425>
- Kutner, M., Greenberg, E., Jin, Y., Boyle, B., Hsu, Y., & Dunleavy, E. (2007). *Literacy in everyday life: Results from the 2003 national assessment of adult literacy*. Washington, DC: National Centre for Education Statistics. Retrieved from <http://nces.ed.gov/Pubs2007/2007480.pdf>
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.
- Kvale, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Los Angeles, CA: Sage Publications.
- Kvale, S. (Ed.). (2007). *Doing Interviews*. London, England: Sage Publications.
- La Forge, J. (1991). Preferred language practice in professional rehabilitation journals. *Journal of Rehabilitation, 57*(1), 49-51.
- Lackaye, T., & Margalit, M. (2006). Comparisons of achievement, effort and self-perceptions among students with learning disabilities and their peers from different achievement groups. *Journal of Learning Disabilities, 39*(5), 432-446.

- Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children's early school adjustment? *Child Development, 61*(4), 1081-1100.
- Lalvani, P. (2012). Privilege, compromise, or social justice: Teachers' conceptualizations of inclusive education. *Disability and Society, 28*(1), 14-27.
- Langdrige, D. (2007). *Phenomenological psychology: Theory, research and method*. London: Person Education Limited.
- Larkin, M., Watts, S., & Clifton, E. (2006). Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology, 3*(2), 102-120.
- Leflot, G., Onghena, P., & Colpin, H. (2010). Teacher-child interactions: Relations with children's self-concept in second grade. *Infant and Child Development, 19*(4), 385-405.
- LeVasseur, J. J. (2003). The problem of bracketing in phenomenology. *Qualitative health research, 13*(3), 408-420.
- Lewis, S., & McKenzie, A. R. (2010). The competencies, roles, supervision, and training needs of paraeducators working with students with visual impairments in local and residential schools. *Journal of Visual Impairment & Blindness, 104*(8), 464-477.
- Lieberman, L. A., Haegele, J. A., Columna, L., & Conroy, P. (2014). How students with visual impairments can learn components of the expanded core curriculum through physical education. *Journal of Visual Impairment & Blindness, 108*(3), 239-251.
- Lieberman, L. J. (2017). Visual impairments. In J. Winnick & D. Poretta (Eds.), *Adapted Physical Education and Sport*, 6<sup>th</sup> ed. (pp. 235-354). Champaign, IL: Human Kinetics.
- Lieberman, L. J., Haegele, J. A., Columna, L., & Conroy, P. (2014). How students with visual impairments can learn components of the expanded core curriculum through physical education. *Journal of Visual Impairment & Blindness, 108*(3), 239-248.
- Lieberman, L. J., Houston-Wilson, C., & Kozub, F. M. (2002). Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly, 19*(3), 364-377.

- Lieberman, L. J., Ponchillia, P., & Ponchillia, S. (2013). *Physical education and sport for individuals who are visually impaired or deafblind: Foundations of instruction*. New York: American Foundation of the Blind.
- Lieberman, L. J., Robinson, B. L., & Rollheiser, H. (2006). Youth with visual impairments: Experiences in general physical education. *RE: view*, 38(1), 35-48.
- Lieberman, L., & McHugh, E. (2001). Health-related fitness of children who are visually impaired. *Journal of Visual Impairment & Blindness*, 95(5), 272-286.
- Lieberman, L., Houston-Wilson, C., & Kozub, F. (2002). Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly*, 19(3), 364-377.
- Lifshitz, H., Hen, I., & Weisser, I. (2007). Self-concept, adjustment to blindness, and quality of friendship among adolescents with visual impairment. *Journal of Visual Impairment & Blindness*, 101(2), 1-20.
- Lincoln, Y. S., S. A. Lynham, and E. G. Guba. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (pp. 97–128). Los Angeles: Sage.
- Llewellyn, A. (2000). Perceptions of mainstreaming: A systems approach. *Developmental Medicine and Child Neurology*, 42(2), 106-115.
- Loeding, B. L. (2002). The use of educational technology and assistive devices in special education. In J. Paul, C. Lavelly, A. Cranston-Gingras & E. Taylor (Eds.), *Rethinking professional issues in special education: Contemporary studies in social & policy issues in education*, (pp. 231-247). Westport, CT: Ablex Publishing.
- Lohmeier, K., Blankenship, K., & Hatlen, P. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment & Blindness*, 103(2), 103-112.
- Lohmeier, K. L. (2009.) Aligning state standards and the expanded core curriculum: Balancing the impact of the no child left behind act. *Journal of Visual Impairment & Blindness*, 103(1), 44-47.
- Lopez-Justicia, D., & del Carmen Pichardo, M. (2001). Self-concept and gender in Spanish low-vision adolescents. *Visual Impairment Research*, 3(1), 7-16.

- Loreman, T., Sharma, U., & Forlin, C. (2013). Do pre-service teachers feel ready to teach in inclusive classrooms? A four-country study of teaching self-efficacy. *Australian Journal of Teacher Education*, 38(1), 26-44.
- Lussenhop, K., & Corn, A. L. (2002). Comparative studies of the reading performance of students with low vision. *RE: view*, 34(2), 57-69.
- Macaulay, L., Deppeler, J., & Agbenyega, J. (2016). Access to quality education for students with disabilities. *Journal of Social Inclusion*, 7(2), 3-17.
- Macionis, J., & Plummer, K. (2005). *Sociology: A global introduction*. UK: Harlow.
- Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in educational research*, 16(2), 193-205.
- Madaus, J. W. (2006a). Employment outcomes of university graduates with learning disabilities. *Learning Disabilities Quarterly*, 29(1), 19-31.
- Madaus, J. W. (2006b). Improving the transition to career for college students with learning disabilities: Suggestions from graduates. *Journal of Postsecondary Education and Disability*, 19(1), 85-93.
- Maehr, M. L., & Midgley, C. (1996). *Transforming school cultures*. Boulder, CO: Westview Press.
- Major, B., & Crocker, J. (1993). Social stigma: The affective consequences of attributional ambiguity. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, cognition, and stereotyping: Interactive processes in intergroup perception* (pp. 345-370). New York, NY: Academic Press.
- Major, B., Kaiser, C. R., & McCoy, S. K. (2003). It's not my fault: When and why attributions to prejudice protect self-esteem. *Personality and Social Psychology Bulletin*, 29(6), 772-781.
- Mansaray, A. A. (2006). Liminality and in/exclusion: Exploring the work of teaching assistants. *Pedagogy, Culture & Society*, 14(2), 171-187.
- Martinko, M. J., & Thomson, N. F. (1998). A synthesis and extension of the Weiner and Kelley attribution models. *Basic & Applied Social Psychology*, 20(4), 271-284.
- Maslow, A. H. (1987). *Motivation and personality (3rd ed.)*. New York, NY: Harper & Row.

- Mawson, B. (2003). Smoothing the path: Technology education and school transition. *Research in Science Education*, 33(4), 503-514.
- McDonnall, M. C., & Crudden, A. (2009). Factors affecting the successful employment of transition-age youths with visual impairments. *Journal of Visual Impairment & Blindness*, 103(6), 329.
- McDougall, J., DeWit, D. J., King, G., Miller, L. T., & Killip, S. (2004). High School-Aged Youths' Attitudes Toward their Peers with Disabilities: the role of school and student interpersonal Factors. *International Journal of Disability, Development and Education*, 51(3), 287-313.
- McLeskey, J., Rosenberg, M., & Westling, D. (2010). *Inclusion: Effective practices for all students* (2nd ed.). Boston, MA: Pearson Education.
- McLinden, M., & Douglas, G. (2013). Education of children with sensory needs: Reducing barriers to learning for children with visual impairment. *The Routledge international companion to educational psychology* (pp. 246-255). London, UK: Routledge.
- McLinden, M., Douglas, G., Cobb, R., Hewett, R., & Ravenscroft, J. (2016). 'Access to learning' and 'learning to access': Analysing the distinctive role of specialist teachers of children and young people with vision impairments in facilitating curriculum access through an ecological systems theory. *British Journal of Visual Impairment*, 34(2), 177-195.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.
- McNaughton, D., & Light, J. (2013). The iPad and mobile technology revolution: Benefits and challenges for individuals who require augmentative and alternative communication. *Augmentative and Alternative Communication* 29(2) 107-116.
- Media Access Australia. (2013). *Inclusion Through Technology. Vision Education Scoping Report*. Ultimo, NSW: Media Access Australia. Retrieved from <https://mediaaccess.org.au/education/low-vision-blindness/vision-education-scoping-report>
- Merleau-Ponty, M (1962). *Phenomenology of perception*. (C Smith Trans.), London: Routledge & Kegan Paul. (Original work published in 1945).

- Merleau-Ponty, M (1964). *Signs*. (R. C. McCleary Trans.), Evanston, IL: Northwestern University Press. (Original work published in 1960).
- Merriam, S. B. (1998). *Qualitative research and case learning applications in education*. San Francisco, NC: Jossey-Bass.
- Messiou, K. (2012). *Confronting Marginalisation in Education: A Framework for Promoting Inclusion*. London, UK: Routledge.
- Messiou, K., & Jones, L. (2015). Pupil mobility: using students' voices to explore their experiences of changing schools. *Children & Society*, 29(4), 255-265.
- Middleton, L. (1999). *Disabled children: Challenging social exclusion*. Malden, MA: Blackwell Sciences.
- Mills, M., Monk, S., Keddie, A., Renshaw, P., Christie, P., Geelan, D. & Gowlett, C. (2014) Differentiated learning: From policy to classroom, *Oxford Review of Education*, 40(3), 331-348.
- Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2006). *Statements of Learning for Information and Communication Technologies (ICT)* Retrieved from [http://www.curriculum.edu.au/verve/\\_resources/SOL06\\_ICT.pdf](http://www.curriculum.edu.au/verve/_resources/SOL06_ICT.pdf)
- Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). (2008). *Melbourne declaration on educational goals for young Australians*. Curriculum Corporation, Melbourne. Retrieved from [http://www.curriculum.edu.au/verve/\\_resources/National\\_Declaration\\_on\\_the\\_Educational\\_Goals\\_for\\_Young\\_Australians.pdf](http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf)
- Mitchell, D. (2010). *Education that fits: Review of international trends in the education of students with special needs*. Retrieved from [http://thehub.superu.govt.nz/sites/default/files/40778\\_Mitchell-Review-Final\\_0.pdf](http://thehub.superu.govt.nz/sites/default/files/40778_Mitchell-Review-Final_0.pdf)
- Mitra, D. L. (2004). The significance of students: Can increasing 'student voice' in schools lead to gains in youth development? *Teachers College Record*, 106, 651-688.
- Mock, D. R., & Kauffman, J. M. (2002). Preparing teachers for full inclusion: Is it possible? *The Teacher Educator*, 37(3), 202-215.

- Mohammed, Z., & Omar, R. (2011). Comparison of reading performance between visually impaired and normally sighted students in Malaysia. *British Journal of Visual Impairment*, 29(3), 196-207.
- Monash University. (2017). *Thesis Including Published Works Guidelines*. Accessed from <https://www.monash.edu/graduate-research/supervisors-and-examiners/examiners/publication>
- Moon, N. W., Todd, R. L., Morton, D. L., & Ivey, E. (2011). *Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM): Findings from research and practice for middle grades through university education*. Atlanta: Centre for Assistive Technology, Georgia Institute of Technology. Retrieved from <http://www.catea.gatech.edu/scitrain/accommodating.pdf>
- Moran, D., & Mooney, T. (2002). *The Phenomenology Readers*. London, UK: Routledge.
- Morash, V. S., & Siu, Y. T. (2016). Social predictors of assistive technology proficiency among teachers of students with visual impairments. *ACM Transactions on Accessible Computing (TACCESS)*, 9(2), 1-27.
- Moriña Díez, A. (2010). School memories of young people with disabilities: An analysis of barriers and aids to inclusion. *Disability and Society*, 25(2), 163-75.
- Morrison, R., & Burgman, I. (2009). Friendship experiences among children with disabilities who attend mainstream Australian schools. *The Canadian Journal of Occupational Therapy*, 76(3), 145-52.
- Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology*, 52(2), 250-260.
- Moss, J. (2012). Understanding visual and intertextual approaches in pedagogical and curriculum research: a pretext. *International Journal of Inclusive Education*, 15(4), 379-388.
- Moss, J. (2013). Visual research methods in education: In between difference and indifference. *International Journal on School Disaffection*. 10(2), 63-77.
- Mpofu, E. (2003). Enhancing social acceptance of early adolescents with physical disabilities: Effects of role salience, peer interaction, and academic support interventions. *International Journal of Disability, Development, and Education*, 50(4), 435-454.

- Mulloy, A. M., Gevarter, C., Hopkins, M., Sutherland, K. S., & Ramdoss, S. T. (2014). Assistive technology for students with visual impairments and blindness. In *Assistive technologies for people with diverse abilities* (pp. 113-156). New York, NY: Springer.
- Murray, I. & Armstrong, H. (2005). *Teaching sight impaired IT students*, in EDUCAUSE Australasia 2005 Conference. Auckland: New Zealand. Retrieved from <http://hdl.handle.net/20.500.11937/24124>
- National Assessment Program Literacy and Numeracy (NAPLAN). (2014). *National report for 2012*. Retrieved from [http://www.nap.edu.au/verve/\\_resources/NAPLAN\\_2012\\_National\\_Report.pdf](http://www.nap.edu.au/verve/_resources/NAPLAN_2012_National_Report.pdf).
- National College for Teaching and Leadership. (2015). *Specification for mandatory qualifications for specialist teachers of children and young people with vision impairments*. Manchester: UK. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/417905/Mandatory\\_Qualifications\\_Government\\_consultation\\_response.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417905/Mandatory_Qualifications_Government_consultation_response.pdf)
- National Digital Learning Resources Network. (2012). *Using Digital Resources*. Retrieved from <http://www.ndlrn.edu.au/default.asp>
- National Disability Strategy (NDS). (2012). *Shut out: The experience of people with disabilities and their families*. Retrieved from <https://www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/shut-out-the-experience-of-people-with-disabilities-and-their-families-in-Australia>  
[https://www.dss.gov.au/sites/default/files/documents/05\\_2012/nds\\_report.pdf](https://www.dss.gov.au/sites/default/files/documents/05_2012/nds_report.pdf)
- Nelson, L. J., Rubin, K. H., & Fox, N. A. (2005). Social withdrawal, observed peer acceptance, and the development of self-perceptions in children ages 4 to 7 years. *Early Childhood Research Quarterly*, 20(2), 185-200.
- Nieto, S. & Bode, P. (2012). *Affirming diversity (6th ed.)*. Boston, MA: Pearson.
- Norman, K., Caseau, D., & Stephanich, G. P. (1998). Teaching students with disabilities in inclusive science classrooms: Survey results. *Science Education*, 82(2), 127-146.
- Norwich, B. (2002). Education, inclusion and individual differences: Recognising and resolving dilemmas. *British Journal of Educational Studies*, 50(4), 482-502.

- Norwich, B. (2008). Dilemmas of difference, inclusion and disability: International perspectives on placement. *European Journal of Special Needs Education*, 23(4), 287-304.
- Norwich, B. (2013). *Addressing tensions and dilemmas in inclusive education: Living with uncertainty*. New York, NY: Routledge.
- Norwich, B. (2014) Recognising value tensions that underlie problems in inclusive education. *Cambridge Journal of Education*, 44(4), 495-510.
- O'Neill, P. T. (2001). Special education and high stakes testing for high school graduation: An analysis of current law and policy. *Journal of Law & Education*, 30, 185–222.
- O'Toole, C., & Burke, N. (2013). Ready, willing and able? Attitudes and concerns in relation to inclusion amongst a cohort of Irish pre-service teachers. *European Journal of Special Needs Education*, 28(3), 239-253.
- O'Donoghue, T. A., & Chalmers, R. (2000). How teachers manage their work in inclusive classrooms. *Teaching and Teacher Education*, 16(8), 889-904.
- OECD. (2010). *Sickness, disability and work: Breaking the barriers. A synthesis of findings across OECD Countries*. OECD Publishing, Paris. Retrieved from <http://www.oecd.org/publications/sickness-disability-and-work-breaking-the-barriers-9789264088856-en.htm>
- OECD. (2012). *Equity and quality in education: Supporting disadvantaged students and schools*, Paris: OECD Publishing. Retrieved from <http://www.oecd.org/edu/school/equityandqualityineducation-supportingdisadvantagedstudentsandschools.htm>
- OECD. (2007). *Education and training policy. No more failures: Ten steps to equity in education*. Retrieved from <http://www.oecd.org/education/school/45179151.pdf>
- OECD. (2013). *Education at a glance 2013: OECD indicators*. Paris: OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/eag-2013-en>
- Oleson, M. (1990). Subjectively perceived quality of life. *Image: The Journal of Nursing Scholarship*, 22(3), 187-190.
- Oliver, M. (1986). Social policy and disability: some theoretical issues. *Disability, Handicap & Society*, 1(1), 5-17.

- Oliver, M. (2009). *Understanding Disability: From Theory to Practice*. (2nd ed.). Basingstoke: Palgrave Macmillan Press.
- Oliver, M. (2013). The social model of disability: thirty years on. *Disability & Society*, 28(7), 1024–1026.
- Olweus, D. (1978). *Aggression in school: Bullies and whipping boys*. Washington, DC: Hemisphere.
- Olweus, D. (1993). *Bullying at school*. Cambridge, MA: Blackwell.
- Olweus, D. (2001). Peer harassment: A critical analysis and some important questions. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 3-20). New York, NY: Guilford Press.
- Olweus, D. (2010). Understanding and researching bullying: Some critical issues. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 9-34). New York, NY: Routledge.
- Operti, R., Walker, Z., & Zhang, Y. (2014). Inclusive education: From targeting groups and schools to achieving quality education as the core of EFA. In L. Florian (Ed.), *The Sage handbook of special education Vol 1* (2nd ed.) (pp. 149-169). London, England: Sage.
- Opie, J. & Southcott, J. (2015). Schooling through the eyes of a student with vision impairment. *International Journal of School Disaffection*, 11(2), 67-81.
- Opie, J., & Southcott, J. (2016). Establishing equity and quality: The experience of schooling from the perspective of a student with vision impairment. *International Journal of Whole Schooling*, 12(2), 19-35.
- Osterman, K. F. (2000) Students' need for belonging in the school community. *Review of Educational Research*. 70(3), 323-367.
- Owens, J. (2007). Liberating voices through narrative methods: The case for an interpretive research approach. *Disability & Society*, 22(3), 299-313.
- Pagliano, P. (2002). Using all the senses. In A. Ashman & J. Elkins (Eds.), *Educating children with diverse abilities* (pp. 237–253). Frenchs Forest, Australia: Pearson.
- Palfrey, J., & Gasser, U. (2013). *Born digital: Understanding the first generation of digital natives*. New York: Basic Books.

- Palmer, D. S., Fuller, K., Arora, T., & Nelson, M. (2001). Taking sides: Parent views on inclusion for their children with severe disabilities. *Exceptional children*, 67(4), 467-484.
- Parette, H. P., & Peterson-Karlan, G. R. (2007). Facilitating student achievement with assistive technology. *Education & Training in Developmental Disabilities*, 42, 387-397.
- Parsons, S., & Cobb, S. (2011). State-of-the-art of virtual reality technologies for children on the autism spectrum. *European Journal of Special Needs Education*, 26(3), 355-366.
- Pearce, M. (2009). The inclusive secondary school teacher in Australia. *International Journal of Whole Schooling*, 5(2), 1-10.
- Pearce, M., Gray, J., & Campbell-Evans, G. (2009). The Inclusive Secondary Teacher: The Leaders' Perspective. *Australian Journal of Teacher Education*, 34(6), 101-119.
- Peers, D., Spencer-Cavaliere, N., & Eales, L. (2014). Say what you mean: rethinking disability language. *Adapted Physical Activity Quarterly*, 31, 265-282.
- Perkins, K., Columna, L., Lieberman, L., & Bailey, J. (2013). Parents' perceptions of physical activity for their children with visual impairments. *Journal of Visual Impairment & Blindness*, 107(2), 131-142.
- Peters, S. J. (2007). Education for all? A historical analysis of international inclusive education policy and individuals with disabilities. *Journal of Disability Policy Studies*, 18(2), 98-108.
- Peters, S., & Oliver, L. (2009). Achieving quality and equity through inclusive education in an era of high-stakes testing. *Prospects*, 39(3), 265-279.
- Peterson-Karlan, G. R., Hourcade, J. J., Parette, H. P. Jr., and Wojcik, B. W. (2007). Special education professionals and assistive technology: Requirements for preparation in a digital age. *Journal of the American Academy of Special Education Professionals*, 5, 68-82.
- Petty, N. J., Thomson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 1: Introducing the philosophy of qualitative research. *Manual Therapy*, 17(4), 267-274.

- Petty, N. J., Thomson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 2: introducing qualitative research methodologies and methods. *Manual Therapy*, 17(5), 378-384.
- Pietkiewicz, I. & Smith, J. A. (2012). A practical guide to using IPA. *Czasopismo Psychologiczne (Psychological Journal)*, 18(2), 361-369.
- Pinquart, M., & Pfeiffer, J. P. (2011). Bullying in German adolescents: Attending a special school for students with visual impairment. *British Journal of Visual Impairment*, 29(3), 163-176.
- Pitt, V. & Curtin, M. (2004). Integration versus segregation: the experiences of a group of disabled students moving from mainstream school into special needs further education. *Disability and Society*, 19(4), 387-401.
- Plowman, L., Stevenson, O., McPake, J., Stephen, C., & Adey, C. (2011). Parents, pre-schoolers and learning with technology at home: Some implications for policy. *Journal of Computer Assisted Learning*, 27(4), 361-371.
- Plowman, L., Stevenson, O., Stephen, C., & McPake, J. (2012). Preschool children's learning with technology at home. *Computers & Education*, 59(1), 30-37.
- Polkinghorne D. E. (1989). Phenomenological research methods. In R. S Valle & S. Halling (Eds.) *Existential-phenomenological perspectives in psychology* (pp. 41–60). New York, NY: Plenum.
- Polkinghorne, D. E. (2003). Generalization in human science: Issues of external validity. In J. Linden & P. Szybek (Eds.), *Validation of knowledge claims in human science* (pp. 121-149). Lyon: L'Interdisciplinaire.
- Priestley, M. (1999). Discourse and Identity: Disabled Children in Mainstream High Schools. In M. Corker & S. French (Eds.), *Disability Discourse* (pp. 92-102). Buckingham: Open University Press.
- Principals' Association of Specialist Schools, Victoria Inc. (2009). *Leading special education in Victoria*. Retrieved from <http://www.passvic.org.au/>
- Pringle, J., Drummond, J., McLafferty, E., & Hendry, C. (2011). Interpretative analysis: A discussion and critique. *Nurse Researcher*, 18(3), 20-24.

- Prinstein, M. J., & Cillessen, A. H. (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill-Palmer Quarterly*, 49(3), 310-342.
- Prochnow, J. E., Kearney, A. C., & Carroll-Lind, J. (2000). Successful inclusion: What do teachers say they need? *New Zealand Journal of Educational Studies*, 35(2), 157-177.
- Purkey, W. (1988). An overview of self-concept theory for counsellors. *ERIC Digest*, 1-6. Retrieved from <http://files.eric.ed.gov/fulltext/ED304630.pdf>
- Queensland Department of Education, Training and Employment (DET). (2013). *Induction Handbook Teacher Aides*. <http://education.qld.gov.au/staff/development/employee/teacheraide/index.html>.
- Raboteg-Saric, Z., & Sakic, M. (2014). Relations of parenting styles and friendship quality to self-esteem, life satisfaction, and happiness in adolescents. *Applied Research in The Quality of Life*, 9(3), 749-765.
- Rahi, J. S., Gilbert, C. E., Foster, A., & Minassian, D. (1999). Measuring the burden of childhood blindness. *British Journal of Ophthalmology*, 83(4), 387-388.
- Ratcliff, J. J., Lieberman, L., Miller, A. K., & Pace, B. (2017). Bullying as a source of posttraumatic growth in individuals with visual impairments. *Journal of Developmental and Physical Disabilities*, 29(2), 265-278.
- Ravenscroft, J. (2013). High attainment low employment: The how and why educational professionals are failing children with visual impairment *The International Journal of Learning*, 18(12), 135-144.
- Ravenscroft, J. (2015). A discussion on what is a qualified teacher of pupils with visual impairment. *British Journal of Visual Impairment* 33(3) 161-166.
- Ravenscroft, J. (2016). Visual impairment and mainstream education: Beyond mere awareness raising. In L. Peer & G. Reid (Eds.). *Special Educational Needs: A Guide for Inclusive Practice*. (2nd ed.) (pp. 232-250). London: Sage.
- Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.
- Redgrove, F. J., Jewell, P., & Ellison, C. (2016). Mind the gap between school and adulthood for people with intellectual disabilities. *Research and Practice in Intellectual and*

*Developmental Disabilities*, 3(2), 182-190.

- Reed, M. & Curtis, K. (2011). High school teachers' perspectives on supporting students with visual impairments toward higher education: Access, barriers, and success. *Journal of Visual Impairment & Blindness*, 105, 548-559.
- Reid, K., Flowers, P. & Larkin, M. (2005). Exploring lived experience: An introduction to interpretative phenomenological analysis. *Psychologist* 18(1), 20-23.
- Riddell, S., & Watson, N. (2014). *Disability, culture and identity*. New York, NY: Routledge.
- Rizvi, F. & Lingard B. (2010). *Globalizing education policy*. London: Routledge.
- Robey, K. L., Minihan, P. M., Long-Bellil, L. M., Hahn, J. E., Reiss, J. G., & Eddey, G. E. (2013). Teaching health care students about disability within a cultural competency context. *Disability and Health Journal*, 6(4), 271-279.
- Rodgers, C. R. (2006). Attending to student voice: The impact of descriptive feedback on learning and teaching. *Curriculum Inquiry*, 36(2), 209-237.
- Rodham, K., Fox, F., & Doran, N. (2015). Exploring analytical trustworthiness and the process of reaching consensus in interpretative phenomenological analysis: Lost in transcription. *International Journal of Social Research Methodology*, 18(1), 59-71.
- Rodkin, P. C., & Hodges, E. V. (2003). Bullies and victims in the peer ecology: Four questions for psychologists and school professionals. *School Psychology Review*, 32(3), 384-400.
- Roe, J. (2008). Social Inclusion: meeting the socio-emotional needs of children with vision needs. *The British Journal of Visual Impairment* 26(2), 147-158.
- Romero-Contreras, S., Garcia-Cedillo, I., Forlin, C., & Lomelí-Hernández, K. A. (2013). Preparing teachers for inclusion in Mexico: How effective is this process? *Journal of Education for Teaching*, 39(5), 509-522.
- Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education*, 32(2), 114-130.
- Rose, C. A., Swearer, S. M., & Espelage, D. L. (2012). Bullying and students with disabilities: The untold narrative. *Focus on Exceptional Children*, 45(2), 1-9.

- Rose, R., & Forlin, C. (2010). Impact of training on change in practice for education assistants in a group of international private schools in Hong Kong. *International Journal of Inclusive Education*, 14(3), 309-323.
- Roth, K., & Columna, L. (2011). Collaborative strategies during transition for students with disabilities. *Journal of Physical Education, Recreation, and Dance*, 81(5), 50-55.
- Roy, A., Guay, F., & Valois, P. (2012). Teaching to address diverse learning needs: Development and validation of a differentiated instruction scale. *International Journal of Inclusive Education*, 17(11), 1186-1204.
- Rule, A. C., Stefanich, G. P., Boody, R. M., & Peiffer, B. (2011). Impact of adaptive materials on teachers and their students with visual impairments in secondary science and mathematics classes. *International Journal of Science Education*, 33(6), 865-887.
- Ryan, G. W., and Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109.
- Sacks, S. Z., & Wolffe, K. (1992). The importance of social skills in the transition process for students with visual impairments. *Journal of Vocational Rehabilitation*, 2(1), 46-55.
- Sacks, S. Z., & Wolffe, K. E. (1998). Lifestyles of adolescents with visual impairments: An ethnographic analysis. *Journal of Visual Impairment & Blindness*, 92(1), 7-17.
- Safhi, M. Y., Zhou, L., Smith, D. W., & Kelley, P. (2009). Assistive technology in teacher-training programs: A national and international perspective. *Journal of Visual Impairment & Blindness*, 103(9), 562-568.
- Sanchez, F. J., & Roda, M. D. (2003). Relationships between self-concept and academic achievement in primary students. *Electronic Journal of Research in Educational Psychology and Psychopedagogy*, 1(1), 95-120.
- Sapp, W., & Hatlen, P. (2010). The expanded core curriculum: Where we have been, where we are going, and how we can get there. *Journal of Visual Impairment & Blindness*, 104(6), 338-346.
- Savage, G. C., Sellar, S. & Gorur, R. (2013). Equity and marketization: Emerging policies and practices in Australian education. *Discourse: Studies in the Cultural Politics of Education*, 34(2), 161-169.

- Savage, G.C. (2013). Tailored equities in the education market: Flexible policies and practices. *Discourse: Studies in the Cultural Politics of Education*, (34)2, 185-201.
- Scarpa, S. (2011). Physical self-concept and self-esteem in adolescents and young adults with and without physical disability: The role of sport participation. *European Journal of Adapted Physical Activity*, 4(1), 38-53.
- Scherer, M. J. (2005). Assessing the benefits of using assistive technologies and other supports for thinking, remembering and learning. *Disability and Rehabilitation*, 27(13), 731-739.
- Scottish Executive Education Department, Support for Learning Division. (2007). *Guidance on appropriate qualifications for teachers of children and young persons who are hearing impaired, visually impaired, or both hearing and visually impaired*. Retrieved from <http://www.gov.scot/Publications/2007/01/29163203/3>
- Segers, K. S. (2014). *Assistive technology for students with visual impairments: In-service teacher training and its relationship to student access and usage across academic subject areas* (Doctoral dissertation, Capella University, Minneapolis, US).
- Seidman, I. (1998) *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York, NY: Teachers College Press.
- Sekol, I. & Farrington, D. P. (2010). The overlap between bullying and victimization in adolescent residential care: Are bully/victims a special category? *Children and Youth Services Review*, 32(12), 1758-1769.
- Shaddock, A. J., Nielsen, T. W., Giorcelli, L., Kilham, C. H., & Hoffman-Raap, L. (2007). What Are the Critical Factors in Ensuring Successful Collaboration Between Mainstream Teachers and Teaching Assistants? In A. J. Shaddock, B. Smyth King, and L. Giorcelli (Eds.), *A Project to Improve the Learning Outcomes of Students with Disabilities in the Early, Middle and Post Compulsory Years of Schooling* (pp. 209– 259). Canberra: Australian Government Department of Education, Science & Training.
- Shaddock, A., MacDonald, N., Hook, J. Giorcelli, L. & Arthur-Kelly, M. (2009). *Disability, diversity and tides that lift all boats: Review of special education in the ACT*. Chiswick, NSW: Services Initiatives.
- Shakespeare, T. (2013). *Disability rights and wrongs revisited*. Oxon, UK: Routledge.

- Sharma, U., & Sokal, L. (2013). The impact of a teacher education course on pre-service teachers' beliefs about inclusion: An international comparison. *Journal of Research in Special Educational Needs*, 15(4), 276-284.
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international comparison of novice pre-service teachers. *International Journal of Special Education*, 21(2), 80-93.
- Sharma, U., Moore, D., Furlonger, B., Smyth King, B., Kaye, L., & Constantinou, O. (2010). Forming effective partnerships to facilitate inclusion of students with vision impairments: Perceptions of a regular classroom teacher and an itinerant teacher. *British Journal of Visual Impairment*, 28(1), 57-67.
- Shields, C. M (2004). Dialogic leadership for social justice: Overcoming pathologies of silence. *Educational Administration Quarterly*, 40(1), 109-132.
- Shinohara, K., & Tenenberg, J. (2009). A blind person's interactions with technology. *Communications of the ACM*, 52(8), 58-66.
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. (3<sup>rd</sup> ed.) London, UK: Sage Publications.
- Simeonsson, R., Carlson, D., Huntington, G., McMillen, J., and Brent, J. (2001). Students with disabilities: A national survey of participation in school activities. *Disability and Rehabilitation*, 23(2), 49-63.
- Simpson, C. G., McBride, R., Spencer, V. G., Loder milk, J., & Lynch, S. (2009). Assistive technology: Supporting learners in inclusive classrooms. *Kappa Delta Pi Record*, 45(4), 172-175.
- Singal, N. (2006). An ecosystemic approach for understanding inclusive education: An Indian case study. *European Journal of Psychology of Education*, 21(3) 239-252.
- Siu, Y-T., & Morash, V. S. (2014). Teachers of students with visual impairments and their use of assistive technology: Measuring the proficiency of teachers and their identification with a community of practice. *Journal of Visual Impairment & Blindness*, 108(5), 384-398.
- Slee, R. (1996). Inclusive schooling in Australia? Not yet. *Cambridge Journal of Education*, 26(1), 19-32.

- Slee, R. (2001). Social justice and the changing directions in education research: The case of inclusive education. *International Journal of Inclusive Education*, 5(2) 167-177.
- Slee, R. (2011). *The irregular school: Exclusion, schooling and inclusive education*. London, England: Routledge.
- Slee, R. (2012). Inclusion in schools: What is the task? In C. Boyle, & K. Topping, K (Eds.), *What works in inclusion?* (pp. 41-51). Maidenhead, England: Open University Press, McGraw-Hill Education.
- Slee, R. (2013). Inclusive Schooling as an Apprenticeship in Democracy? In L. Florian (Ed.), *The Sage Handbook of Special Education: Two Volume Set, 1*, (pp. 217-224). London, UK: Sage.
- Slee, R. (2013a). *How do we make inclusive education happen when exclusion is a political predisposition?* *International Journal of Inclusive Education*, 17(8), 895-907.
- Smith, A. F. & Smith J. G. (1996). The economic burden of global blindness: A price too high! *British Journal of Ophthalmology*, 80(4), 276-7.
- Smith, A. J., Geruschat, D., & Huebner, K. M. (2004). Policy to practice: Teachers' and administrators' views on curricular access by students with low vision. *Journal of Visual Impairment & Blindness*, 98(10), 612-628.
- Smith, D. W., & Kelley, P. (2007). A survey of assistive technology and teacher preparation programs for individuals with visual impairments. *Journal of Visual Impairment & Blindness*, 101(7), 429-433.
- Smith, D. W., Kelley, P., Maushak, N. J., Griffin-Shirley, N., & Lan, W. Y. (2009). Assistive technology competencies for teachers of students with visual impairments. *Journal of Visual Impairment & Blindness*, 103(8), 457-469.
- Smith, J. A. (1996). Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology & Health*, 11(2), 261-271.
- Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology*, 1(1), 39-54.

- Smith, J. A. (2008). *Qualitative psychology: A practical guide to research methods*. Los Angeles: Sage.
- Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis. *Health Psychology Review, 5*(1), 9-27.
- Smith, J. A. (2011a). 'We could be diving for pearls': The value of the gem in experiential qualitative psychology. *Qualitative Methods in Psychology, 12*, 6-15.
- Smith, J. A. (2015). *Qualitative psychology: A practical guide to research methods*. (3<sup>rd</sup> ed.). London: Sage.
- Smith, J. A. (2017). Interpretative phenomenological analysis: Getting at lived experience. *The Journal of Positive Psychology, 12*(3), 303-304.
- Smith, J. A., & Eatough, V. (2007). Interpretative phenomenological analysis. In E. Lyons & A. Coyle (Eds.), *Analysing qualitative data in psychology* (pp. 35-50). London, England: Sage.
- Smith, J. A., & Osborn, M. (2003). Interpretative phenomenology analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 53-80). London: Sage.
- Smith, J. A., & Osborn, M. (2015). Interpretative phenomenological analysis as a useful methodology for research on the lived experience of pain. *British Journal of Pain, 9*(1), 41-42.
- Smith, J. A., Brewer, H. M., Eatough, V., Stanley, C. A., Glendinning, N. W., & Quarrell, O. W. J. (2006). The personal experience of juvenile Huntington's disease: An interpretative phenomenological analysis of parents' accounts of the primary features of a rare genetic condition. *Social and Behavioral Research in Clinical Genetics, 69*(6), 486-496.
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Los Angeles, CA: Sage.
- Smith, J. A., Jarman, M. & Osborne, M. (1999). Doing interpretative phenomenological analysis. In M. Murray & K. Chamberlain (Eds.), *Qualitative health psychology: Theories and methods* (pp. 218-240). London, UK: Sage.

- Söderström, S., & Ytterhus, B. (2010). The use and non-use of assistive technologies from the world of information and communication technology by visually impaired young people: A walk on the tightrope of peer inclusion. *Disability & Society*, 25(3), 303-315.
- Solomon, A. (2012). *Far from the tree: Parents, children, and the search for identity*. New York, NY: Scribner.
- Solomon, D., Watson, M., Battistich, V., Schaps, E., & Delucchi, K. (1996). Creating classrooms that students experience as communities. *American Journal of Community Psychology*, 24(6), 719-748.
- South Australia Department for Education and Child Development. (2016). *School for vision impaired*. Retrieved from <http://www.sasvi.sa.edu.au/curriculum.htm>
- Southcott, J., & Joseph, D. (2015). Singing in La Voce Della Luna Italian women's choir in Melbourne, Australia. *International Journal of Music Education*, 33(1), 91-102.
- Spradley, J. P. 1979. *The Ethnographic Interview*. New York: Holt, Rinehart and Winston.
- Stake, R. E. (1978). The case study method in social inquiry. *Educational researcher*, 7(2), 5-8.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- State Government of Victoria: Department of Education and Training. (2015). *ICT school planning*. Retrieved from <http://www.education.vic.gov.au/school/teachers/support/Pages/planning.aspx>
- State Government of Victoria: Department of Education and Training. (2015a). *School policy and advisory service. Using digital technologies to support teaching and learning*. Retrieved from <http://www.education.vic.gov.au/school/principals/spag/curriculum/Pages/techsupport.aspx>
- Statewide Vision Resource Center. (SVRC). (2015). *Support for school-aged children with vision impairments in Victoria*. Retrieved from [http://svrc.vic.edu.au/Support\\_Vic\\_VI.pdf](http://svrc.vic.edu.au/Support_Vic_VI.pdf)
- Statewide Vision Resource Centre (SVRC). (2016). *Expanded core curriculum for students with vision impairments*. Retrieved from <http://svrc.vic.edu.au/curriculum/expanded/>

- Stefanich, G. P., Norman, K. I., & Egelston-Dodd, J. (1996). *Teaching science to students with disabilities: Experiences and perceptions of classroom teachers and science educators*. Pittsburgh, PA: Association for the Education of Teachers in Science.
- Stephenson, J., & Carter, M. (2014). The work of teacher aides in Australia: An analysis of job advertisements. *International Journal of Special Education*, 29(3), 145-153.
- Strauss A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Streeter, L. (2010). The continuing saga of people-first language. *Braille Monitor*, 53(5) 58-63. Retrieved from <https://nfb.org/images/nfb/publications/bm/bm10/bm1005/bm1005tc.htm>
- Stuart, M. E., Lieberman, L. J., & Hand, K. (2006). Parent-child beliefs about physical activity: An examination of families of children with visual impairments. *Journal of Visual Impairment & Blindness*, 100(4), 223-234.
- Supalo, C. A., Isaacson, M. D., & Lombardi, M. V. (2013). Making hands-on science learning accessible for students who are blind or have low vision. *Journal of Chemical Education*, 91(2), 195-199.
- Suter, J. C., & Giangreco, M. F. (2009). Numbers that count: Exploring special education and paraprofessional service delivery in inclusion-oriented schools. *The Journal of Special Education*, 43(2), 81-93.
- Sutherland, K. S., & Wehby, J. H. (2001). Exploring the relationship between increased opportunities to respond to academic requests and the academic and behavioral outcomes of students with EBD: A review. *Remedial and Special Education*, 22(2), 113-121.
- Swanson, S. (2003). Motivating learners in northern communities. *Canadian Journal of Native Education* 27(1), 61-73.
- Swearer, S. M., & Hymel, S. (2015). Understanding the psychology of bullying: Moving toward a social-ecological diathesis–stress model. *American Psychologist*, 70(4), 344-353.
- Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2010). What can be done about school bullying? Linking research to educational practice. *Educational Researcher*, 39(1), 38-47.

- Swearer, S. M., Wang, C., Maag, J. W., Siebecker, A. B., & Frerichs, L. J. (2012). Understanding the bullying dynamic among students in special and general education. *Journal of School Psychology, 50*(4), 503-520.
- Takala, M. (2007). The work of classroom assistants in special and mainstream education in Finland. *British Journal of Special Education, 34*(1), 50-57.
- Taliaferro, A. R., Hammond, L., & Wyant, K. (2015). Preservice physical educators' self-efficacy beliefs toward inclusion: The impact of coursework and practicum. *Adapted Physical Activity Quarterly, 32*(1), 49-67
- Tasmanian Government. (2015). *Guidelines for inclusive language*. Retrieved from <https://www.education.tas.gov.au/documentcentre/Documents/Guidelines-for-Inclusive-Language.pdf>
- Taylor, R., & Mesco, J. (2017). Differentiating instruction: Challenges in the secondary classroom. *International Journal of Education and Social Science 3*(10), 58-61.
- Terven, J. R., Salas, J., & Raducanu, B. (2014). New opportunities for computer vision-based assistive technology systems for the visually impaired. *Computer, 47*(4), 52-58.
- Tew, J., Bennett, A. L., & Dixon, L. (2016). The Chromis experience: An interpretive phenomenological analysis of participants' experiences of the Chromis programme. *International Journal of Offender Therapy and Comparative Criminology, 60*(4), 1669-1689.
- Tews, L., & Lupart, J. (2008). Students with disabilities' perspectives of the role and impact of paraprofessionals in inclusive education settings. *Journal of Policy and Practice in Intellectual Disabilities, 5*(1), 39-46.
- Thomas, C. (1999). *Female forms: Experiencing and understanding disability*. Buckingham, UK: Open University Press.
- Thomas, C., & Corker, M. (2002). A journey around the social model. In M. Corker & T. Shakespeare (Eds.). *Disability/postmodernity: embodying disability theory*. New York, NY: Continuum.
- Thomas, R., Barker, L., Rubin, G., & Dahlmann-Noor, A. (2015). Assistive technology for children and young people with low vision. *The Cochrane Library*. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD011350.pub2/full>
- Thomazet, S. (2009). From integration to inclusive education: Does changing the terms

- improve practice? *International Journal of Inclusive Education*, 13(6), 553-563.
- Thomson, P., & Gunter, H. (2006). From 'consulting pupils' to 'pupils as researchers': A situated case narrative. *British Educational Research Journal*, 32(6), 839-856.
- Thurston, M. (2014). "They think they know what's best for me": An interpretative phenomenological analysis of the experience of inclusion and support in high school for vision-impaired students with albinism. *International Journal of Disability, Development and Education*, 61(2), 108-118.
- Titchkosky, T. (2001). Disability: A rose by any other name? "People-first" language in Canadian society. *Canadian Review of Sociology*, 38(2), 125-140.
- Titchkosky, T. (2007). *Reading and Writing Disability Differently: The Textured Life of Disability*. Toronto: University of Toronto Press.
- Tomlinson, C.A. (1995). Deciding to differentiate instruction in middle school: One school's journey. *Gifted Child Quarterly*, 39(2), 77-87.
- Tomlinson, C.A. (2014) *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Heatherton, Victoria: Hawker Brownlow Education.
- Tomlinson, C.A., Brimijoin, K. & Narvaez, L. (2008) *The differentiated school: Making revolutionary changes in teaching and learning*. Virginia, USA: ASCD.
- Trautwein, U., Lüdtke, O., Marsh, H. W., & Nagy, G. (2009). Within-school social comparison: How students perceive the standing of their class predicts academic self-concept. *Journal of Educational Psychology*, 101(4), 853-866.
- Tufford, L., & Newman P. (2010). Bracketing in qualitative research. *Qualitative Social Work* 11(1), 80-96.
- Tuttle, D. W., & Tuttle, N. R. (2004). *Self-esteem and adjusting with blindness* (3rd ed.). Springfield, IL: Edward C. Thomas.
- U.S. Department of Justice, Civil Rights Division, Equal Employment Opportunity Commission. (2002). *Americans with Disabilities Act: Questions and answers*. Retrieved from <http://www.ada.gov/qandaeng.htm>
- UNESCO. (2005). *Guidelines for inclusion: Ensuring access to education for all*. Retrieved from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>

- UNESCO. (1981). *International year of disabled persons - Sundberg declaration*. Retrieved from [http://www.unesco.org/education/nfsunesco/pdf/SUNDBE\\_E.PDF](http://www.unesco.org/education/nfsunesco/pdf/SUNDBE_E.PDF)
- UNESCO. (1990). *World conference on EFA*. Retrieved from [http://www.unesco.org/education/information/nfsunesco/pdf/JOMTIE\\_E.PDF](http://www.unesco.org/education/information/nfsunesco/pdf/JOMTIE_E.PDF)
- UNESCO. (1994). *The world conference on special needs education: Access and quality. Final report*. Salamanca, Spain: Ministry of Education and Science, Madrid. Retrieved from [www.unesco.org/education/pdf/SALAMA\\_E.PDF](http://www.unesco.org/education/pdf/SALAMA_E.PDF)
- UNESCO. (2000). *The Dakar framework for action*. Retrieved from [http://www.unesco.at/bildung/basisdokumente/dakar\\_aktionsplan.pdf](http://www.unesco.at/bildung/basisdokumente/dakar_aktionsplan.pdf)
- UNESCO. (2003). *Ten questions about inclusive education*. Retrieved from <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/inclusive-education/10-questions-on-inclusive-quality-education/>
- UNESCO. (2008). *Inclusive education: The way of the future. Conclusions and recommendations of the 48th session of the international conference on education Geneva 25-28 November, 2008*. Retrieved from [www.ibe.unesco.org/National\\_Reports/ICE\\_2008/brazil\\_NR08.pdf](http://www.ibe.unesco.org/National_Reports/ICE_2008/brazil_NR08.pdf)
- UNESCO. (2009). *Policy guidelines on inclusion in education*. Retrieved from <http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>
- UNESCO. (2012). *Education: Addressing exclusion. A guide to assessing education systems towards more inclusive and just societies*. Retrieved from <http://unesdoc.unesco.org/images/0021/002170/217073e.pdf>
- UNICEF. (2010). *Assessing child-friendly schools: A guide for programme managers in East Asia and the Pacific*. Retrieved from: [http://www.unicef.org/eapro/Assessing\\_CFS.pdf](http://www.unicef.org/eapro/Assessing_CFS.pdf).
- UNICEF and World Health Organization. (2015). *Assistive technology for children with disabilities: Creating opportunities for education, inclusion and participation. A discussion paper*. Retrieved from <https://www.unicef.org/disabilities/files/Assistive-Tech-Web.pdf>
- Union of the Physically Impaired Against Segregation. (1976). *Fundamental principles of disability*. Retrieved from <http://disability-studies.leeds.ac.uk/files/library/UPIAS-fundamental-principles.pdf>

- United Nations. (1948). *Universal Declaration of Human Rights*. Retrieved from <http://www.un.org/en/universal-declaration-human-rights/>
- United Nations. (1975). *Declaration on the rights of disabled persons*. Retrieved from <http://www.ohchr.org/EN/ProfessionalInterest/Pages/RightsOfDisabledPersons.aspx>
- United Nations. (1989). *Convention on the rights of the child*. Retrieved from <http://www.childrensa.sa.gov.au/rights/un-conventions/un-convention-on-the-rights-of-the-child-uncrc.html>
- United Nations. (2002). *The UN and disabled persons: The first fifty years*. Retrieved from <http://www.un.org/esa/socdev/enable/dis50y20.htm>
- United Nations. (2006). (CRPD). *Convention on the rights of persons with disabilities*. Retrieved from [http://www.un.org/disabilities/documents/convention/convention\\_accessible\\_pdf.pdf](http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf)
- United Nations. (2006). *Final report of the ad hoc committee on a comprehensive and integral international convention on the protection and promotion of the rights and dignity of persons with disabilities*. Retrieved from <http://www.un.org/esa/socdev/enable/rights/ahcfinalrepe.htm>
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In: Zanna, M.P. (Ed.), *Advances in experimental social psychology* (pp. 271-360). New York: Academic Press.
- Van Cleave, J., Davis, M. M. (2006). Bullying and peer victimization among children with special health care needs. *Pediatrics*, 118(4), 1212-1219.
- van Manen, M. (2011). The hermeneutic reduction. *Phenomenology online: A resource for Phenomenological Inquiry* Accessed from <http://www.phenomenologyonline.com/inquiry/methodology/reductio/hermeneutic-reduction/>
- van Munster, M., Weaver, E., Lieberman, L., & Arndt, K. (2015). Physical Education and Visual Impairment: Collaborative Communication for Effective Inclusion. *Journal of Visual Impairment & Blindness*, 109(3), 231-237.
- Van Reusen, A. K., Shoho, A. R., & Barker, K. S. (2000). High school teacher attitudes toward inclusion. *The High School Journal*, 84(2), 7-20.

- Victoria State Government. Education and Training. (2016). *Victorian skills gateway: Becoming a teachers' aide*. Retrieved from <http://www.skills.vic.gov.au/victorianskillsgateway/Students/Pages/OccupationSearchDescription.aspx?type=occupationandkeyword=andsearchid=911>
- Victoria State Government. (2012). *Student support services guidelines*. Retrieved from <http://www.education.vic.gov.au/Documents/school/principals/spag/safety/studsuppguidelines.pdf>
- Victorian Curriculum and Assessment Authority (VCAA). (2014). *VCE and VCAL Administrative Handbook* Retrieved online [www.vcaa.vic.edu.au/Documents/handbook/2014/13-AdminHB-2014-Special-Provision.pdf](http://www.vcaa.vic.edu.au/Documents/handbook/2014/13-AdminHB-2014-Special-Provision.pdf)
- Victorian Equal Opportunity and Human Rights Commission. (2012). *Held Back: The experiences of students with disabilities in Victorian schools*. Retrieved from [http://www.humanrightscommission.vic.gov.au/media/k2/attachments/1404-VEOHRC\\_HeldBack\\_-\\_StudentwithDisabilityReportW3.pdf](http://www.humanrightscommission.vic.gov.au/media/k2/attachments/1404-VEOHRC_HeldBack_-_StudentwithDisabilityReportW3.pdf)
- Victorian Institute of Teaching. (2016). *Professional responsibilities: Special needs plan*. Retrieved from <http://www.vit.vic.edu.au/professional-responsibilities/special-needs-plan>
- Vilchinsky, N., Findler, L., & Werner, S. (2010). Attitudes towards people with disabilities: The perspective of attachment theory. *Rehabilitation Psychology, 55*(3), 298–306.
- Vision Australia. (2012). *Supporting children who are blind or have low vision*. Retrieved from <http://www.visionaustralia.org/services/children>
- Vision Australia. (2015). *Submission to the 2015 review of the disability standards for education*. Retrieved from <https://docs.education.gov.au/node/40531>
- Vision Australia. (2017). *Blindness and vision loss*. Retrieved from <http://www.visionaustralia.org/learn-more/newly-diagnosed/blindness-and-vision-loss>
- Vislie, L. (2003). From integration to inclusion: Focusing global trends and changes in the Western European societies. *European Journal of Special Needs Education, 18*(1), 17-35.

- Vlachou, A., & Papananou, I. (2015) Disabled students' narratives about their schooling experiences. *Disability & Society*, 30(1), 73-86.
- Von Eckartsberg, R. (1998). Existential-phenomenological research. In R. Valle (Ed.), *Phenomenological inquiry in psychology* (pp. 21-61). New York: Plenum.
- Vygotsky, L. S. (1993). The fundamentals of defectology (abnormal psychology and learning disabilities). In R. W Rieber & A. S. Carton (Eds.), *The collected works of L. S. Vygotsky Vol.2*. NY: Plenum Press.
- WA. DET, (2010). *Schools of special educational needs: The expanded core curriculum*. <http://det.wa.edu.au/ssen/detcms/school-support-programs/schools-of-special-educational-needs/vision-education-service/the-expanded-core-curriculum.en>
- Wagner, M., Haibach, P. S., & Lieberman, L. J. (2013). Gross motor skill performance in children with and without visual impairments: Research to practice. *Research in Developmental Disabilities*, 34(10), 3246-3252.
- Wagstaff, C., Jeong, H., Nolan, M., Wilson, R., Tweedlie, J., Phillips, E., Senu, H. & Holland, F. (2014). The accordion and the deep bowl of spaghetti: Eight researchers' experiences of using IPA as a methodology. *The Qualitative Report*, 19(47), 1-15.
- Walmsley, J. (2001). Normalisation, emancipatory research and inclusive research in learning disability. *Disability & Society*, 16(2), 187-205.
- Ward, S., Farnsworth, C., Babkes-Stellino, M., & Perrett, J. (2011). Parental influence and the attraction to physical activity for youths who are visually impaired at a residential-day school. *Journal of Visual Impairment & Blindness*, 105(8), 493-498.
- Warhurst, C., Nickson, D., Commander, J., & Gilbert, K. (2014). 'Role stretch': Assessing the blurring of teaching and non-teaching in the classroom assistant role in Scotland. *British Educational Research Journal*, 40(1), 170-186.
- Webster, R. (2014). 2014 Code of Practice: How research evidence on the role and impact of teaching assistants can inform professional practice. *Educational Psychology in Practice*, 30(3), 232-237.
- Webster, R. and Blatchford, P. (2015). Worlds apart? The nature and quality of the educational experiences of pupils with a statement for special educational needs in mainstream primary schools. *British Educational Research Journal*, 41(2), 324-342.

- Webster, R., Blatchford, P., & Russell, A. (2013). Challenging and changing how schools use teaching assistants: Findings from the effective deployment of teaching assistants project. *School Leadership & Management*, 33(1), 78-96.
- Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C., & Russell, A. (2011). The wider pedagogical role of teaching assistants. *School Leadership & Management*, 31(1), 3-20.
- Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C., & Russell, A. (2010). Engaging with the question 'should teaching assistants have a pedagogical role?'. *European Journal of Special Needs Education*, 25(4), 347-348.
- Wehmeyer, M. L., & Little, T. D. (2009). Self-determination. In S. Lopez (Ed.), *The encyclopedia of positive psychology* Vol. 2, (pp. 868-874). Boston, MA: Blackwell.
- Wehmeyer, M. L., & Palmer, S. B. (2003). Adult outcomes for students with cognitive disabilities three-years after high school: The impact of self-determination. *Education and Training in Developmental Disabilities*, 38(2), 131-144.
- Wenar, L. (2013). John Rawls. In E. N. Zalta (Ed.), *The Stanford Encyclopaedia of Philosophy (Winter 2013 Edition)*. <http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=rawls>
- Wentzel, K. B., & Asher, S. R. (1995). The academic lives of neglected, rejected, popular, and controversial children. *Child Development*, 66(3), 754-763.
- Wertz, F. J. (1985). Methods and findings in an empirical analysis of "being criminally victimized." In A. Giorgi (Ed.), *Phenomenology and psychological research* (pp. 155-216). Pittsburgh, PA: Duquesne University Press.
- West, J., Houghton, S., Taylor, M., & Ling, P. K. (2004). The perspectives of Singapore secondary school students with vision impairments towards their inclusion in mainstream education. *Australasian Journal of Special Education*, 28(1), 18-27.
- Whitburn, B. (2013). The dissection of paraprofessional support in inclusive education: 'You're in mainstream with a chaperone'. *Australasian Journal of Special Education*, 37(02), 147-161.
- Whitburn, B. (2014). National and international disability rights legislation: A qualitative account of its enactment in Australia. *International Journal of Inclusive Education*, 19(5), 518-529.

- Whitburn, B. (2014c). 'A really good teaching strategy': Secondary students with vision impairment voice their experiences of inclusive teacher pedagogy. *British Journal of Visual Impairment*, 32(2), 148-156.
- Whitburn, B. (2014a). Accessibility and autonomy preconditions to 'our' inclusion: a grounded theory study of the experiences of secondary students with vision impairment. *Journal of Research in Special Educational Needs*, 14(1), 3-15.
- Whitburn, B. (2014b). The 'inclusion' of students with vision impairments: Generational perspectives in Australia. *International Journal of Whole Schooling*, 10(1), 1-18.
- Wilson, E., & Bedford, D. (2008). 'New Partnerships for Learning': Teachers and teaching assistants working together in schools – the way forward. *Journal of Education for Teaching*, 34(2), 137-150.
- Wilson, V., Schlapp, U., & J. Davidson. (2003). An 'extra pair of hands'? Managing classroom assistants in Scottish primary schools. *Educational Management Administration & Leadership*, 31(2), 189-205.
- Withers, A. J. (2012). *Disability politics and theory*. Black Point, NS: Fernwood.
- Wolffe, K. E., Sacks, S. Z., Corn, A. L., Erin, J. N., Huebner, K. M., & Lewis, S. (2002). Teachers of students with visual impairments: What are they teaching? *Journal of Visual Impairment & Blindness*, 96(5), 293-304.
- Wolffe, K., & Kelly, S. M. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment & Blindness*, 105(6), 340-349.
- Wolffe, K., & Sacks, S. Z. (1997). The Lifestyles of Blind, Low Vision, and Sighted Youths: A Quantitative Comparison. *Journal of Visual Impairment & Blindness*, 91(3), 245-57.
- Wolffsohn, J. S., Peterson, R. C., & Alves, C. C. (2003). A review of current knowledge on Electronic Vision Enhancement Systems for the visually Impaired. *Ophthalmic and Physiological Optics* 23(1), 35-42
- Wong M. E, & Cohen, L. G. (2015). Access and challenges of assistive technology application: Experience of teachers of students with visual impairments in Singapore. *Disability, CBR & Inclusive Development*, 26(4), 138-154.

- World Health Organization and World Bank. (2011). *World report on disability*. Retrieved from [http://www.who.int/disabilities/world\\_report/2011/report.pdf](http://www.who.int/disabilities/world_report/2011/report.pdf)
- Wright, B. A. (1983). *Physical disability: a psychosocial approach*. New York, NY: Harper & Row.
- Wright, B. A. (1988). Attitudes and the fundamental negative bias. In H. E. Yuker (Ed.), *Attitudes toward persons with disabilities* (pp. 3–21). New York, NY: Springer.
- Wright, B. A. (1991). Labeling: The need for greater person-environment individuation. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective* (469–487). New York, NY: Pergamon Press.
- Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology & Health, 15*(2), 215-229.
- Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report, 20*(2), 134-142.
- Yell, M. L. (1995). Least restrictive environment, inclusion, and students with disabilities: A legal analysis. *The Journal of Special Education, 28*(4), 389-404.
- Yin, R. K. (2009). *Case study research: Design and methods* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage publications.
- Young, I. M. (1990). *Justice and politics of difference*. Princeton, NJ: Princeton University Press.
- Zebehazy, K. T., & Smith, T. J. (2011). An examination of characteristics related to the social skills of youths with visual impairments. *Journal of Visual Impairment & Blindness, 105*(2), 84-95.
- Zheng, C., Gaumer Erickson, A., Kingston, N. M., & Noonan, P. M. (2014). The relationship among self-determination, self-concept, and academic achievement for students with learning disabilities. *Journal of Learning Disabilities, 47*(5), 462-474.
- Zhou, L., Ajuwon, P. M., Smith, D. W., Griffin-Shirley, N., Parker, A. T., & Okungu, P. (2012). Assistive technology competencies for teachers of students with visual impairments: A national study. *Journal of Visual Impairment & Blindness, 106*(10), 656-665.

- Zhou, L., Parker, A. T., Smith, D. W., & Griffin-Shirley, N. (2011). Assistive technology for students with visual impairments: Challenges and needs in teachers' preparation programs and practice. *Journal of Visual Impairment & Blindness*, 105(4), 197-210.
- Zhou, L., Smith, D. W., Parker, A. T., & Griffin-Shirley, N. (2011). Assistive technology competencies of teachers of students with visual impairments: A comparison of perceptions. *Journal of Visual Impairment & Blindness*, 105(9), 533-547.
- Zigmond, N. (2003). Where should students with disabilities receive special education services? Is one place better than another? *The Journal of Special Education*, 37(3), 193-199.

# Appendices.

## Appendix A: Ethics permission



### Human Ethics Certificate of Approval

This is to certify that the project below was considered by the Monash University Human Research Ethics Committee. The Committee was satisfied that the proposal meets the requirements of the *National Statement on Ethical Conduct in Human Research* and has granted approval.

**Project Number:** CF15/1178 - 2015000553

**Project Title:** Inclusive School Experience for Vision Impaired Secondary Students attending Mainstream Victorian Schools.

**Chief Investigator:** Assoc Prof Jane Southcott

**Approved:** From: 30 April 2015 To: 30 April 2020

*Terms of approval - Failure to comply with the terms below is in breach of your approval and the Australian Code for the Responsible Conduct of Research.*

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, before any data collection can occur at the specified organisation.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must include your project number.
6. Amendments to the approved project (including changes in personnel): Require the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. Future correspondence: Please quote the project number and project title above in any further correspondence.
8. Annual reports: Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. Final report: A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. Monitoring: Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. Retention and storage of data: The Chief investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.



Professor Nip Thomson  
Chair, MUHREC

cc: Prof Joanne Deppeler, Ms Jill Opie

Monash University, Room 111, Chancellery Building E  
24 Sports Walk, Clayton Campus, Wellington Rd  
Clayton VIC 3800, Australia

Email: [muhrec@monash.edu](mailto:muhrec@monash.edu) <http://intranet.monash.edu.au/researchadmin/human/index.php>  
ABN 12 377 614 012 CRICOS Provider #00008C

## Appendix B: Permission Letter, Guide Dogs

---

### PERMISSION LETTER

Project: Inclusive School Experience for Vision Impaired Secondary Students attending Mainstream Victorian Schools.

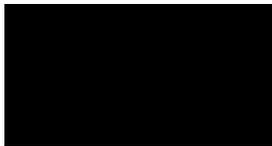
Date 11/12/15

Dear Associate Professor Jane Southcott and Researcher Jill Opie,

Thank you for your request to recruit participants for the above-named research.

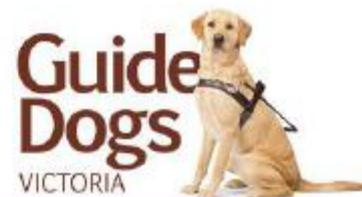
I have read and understood the Explanatory Statement regarding the research project (Project: Inclusive School Experience for Vision Impaired Secondary Students attending Mainstream Victorian Schools.) and hereby give permission for this research to be conducted.

Yours sincerely,



Laura Hunt  
Children's Services Manager  
Guide Dogs Victoria

ABN 68 004 621 461  
2-6 Chandler Highway Kew Victoria 3101  
Telephone 03 9854 4444 Facsimile 03 9854 4466  
Email [info@guidedogsvictoria.com.au](mailto:info@guidedogsvictoria.com.au)  
[www.guidedogsvictoria.com.au](http://www.guidedogsvictoria.com.au)

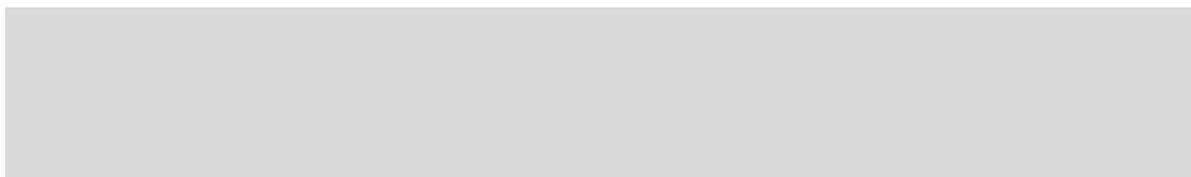


## Appendix C. Explanatory statement



**MONASH** University

### **EXPLANATORY STATEMENT** **Student Participant (and their parents)**



**Project: The Nature of Inclusive School Experiences for Vision Impaired Secondary Students attending Mainstream Victorian Schools.**

**Associate Professor Jane Southcott**

Faculty of Education

[Redacted]

[Redacted]

**Professor Joanne Deppeler**

Faculty of Education

Phone:

[Redacted]

**Jill Opie**

[Redacted]

[Redacted]

You are invited to take part in this study. Please read this Explanatory Statement in full before deciding whether or not to participate in this research. If you would like further information regarding any aspect of this project, you are encouraged to contact the researchers via the phone numbers or email addresses listed above.

#### **What does the research involve?**

The aim of this project is to explore the nature of the schooling experiences for older vision impaired students in secondary schools. We are particularly interested in how procedures of inclusion may have impacted on the education of these students. The study will involve 1-3 approximately hour-long in-depth interviews of each participant, at a location convenient to them.

### **Why were you chosen for this research?**

The research seeks vision-impaired participants in their late teens (16-19) who have been (or still are) attending mainstream schools. We have asked that Guide Dogs Victoria pass on this explanatory statement to possible participants. If you are interested please contact the student researcher about the project and she will be happy to ring you and talk about the project more. We encourage you to discuss this with your parents. Any interested students (with parental permission if under 18) would be asked to contact the student researcher by phone or email to opt into the study.

Students with vision impairment are customarily taught by sighted teachers surrounded by sighted peers. Rarely are students with vision impairments given the opportunity to inform members of their education community what best practice really is for them in their experience of inclusive education. It may not be possible for the participants of this study to benefit directly from the final outcomes of the research, but their input for future students could be invaluable with the shared knowledge and further research that may ensue. Being able to have someone really listen to how school is for you and what your experiences have been may have positive consequences. Also knowing you are helping others may be enough to encourage you to take part in this research.

### **Consenting to participate in the project and withdrawing from the research**

Participation is optional. If you do agree to take part, you do not have to answer any interview question and you can stop the interview at any time. You have the right to withdraw from further participation in this research until you have approved the transcript or audio file of your interview. Accompanying this Explanatory Statement is a consent form for you to read and complete if you agree.

### **Possible benefits and risks to participants**

Possible benefits may arise, as you will have a voice, and be able to tell what schooling is like from your perspective. What the real nature of the experience you reveal may lead to recommendations and further research into how students can best be catered for in their schooling. Although we do not anticipate that talking to you will be upsetting, if you do feel uncomfortable we suggest that you talk to your parents/guardians or counsellors at Guide Dogs Victoria.

