**Establishing equity and quality: The experience of schooling**

**from the perspective of a student with vision impairment**

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**Abstract**

A single participant 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. 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 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.

**Keywords:** disability, inclusive education, interpretative phenomenological analysis, phenomenology, vision impairment, student voice

**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, p. 6). Despite such an aspiration, there continue to be hurdles to the achievement of inclusive education (Slee, 2013a, 2013b). Ideally 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” (UNESCO, 2005, p. 12). Inclusive education refers to regular education programs “appropriate to the physical, curricular, and social needs” of all students, including those with disabilities (Brown, Packer & Passmore, 2013, p. 223). 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; Slee, 2001). Educational equity recognizes that equal treatment does not equate with equal opportunity to learn (de Valenzuela, 2014; Artiles & Kozleski, 2016). 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, & Constantinou, 2010).

Relatively few studies have considered the views of students with disabilities on the equity and quality of education they experienced (Byrnes & Rickards, 2011; Curtin & Clarke, 2005; Redgrove, Jewell & Ellison, 2016), and even more limited is research reporting the views of those with vision impairment (OECD, 2012; Thurston, 2014, 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) expressed 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, Norwich, 2002). 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; Adderley, Hope, Hughes, Jones, Messiou & Shaw, 2015; 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; Commonwealth of Australia, 2016).

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 require a prohibitively lengthy amount of time to use (Bardin & Lewis, 2008; [Mohammed & Omar, 2011](#_ENREF_27)). For many students with vision impairment 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](#_ENREF_19)). 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 (Brown, Packer & Passmore, 2013; Opie &Southcott, 2015).

Students with vision impairments face particular challenges in science, technology, art and mathematics with educational material often presented in visual formats such as posters, charts, diagrams, models and demonstrations (Bardin & Lewis, 2008; Supalo, Isaacson & Lombardi, 2013). Alternative forms of access are required (Rule, Stefanich, Boody & Peiffer, 2011) but not always available when teachers hold stereotypical views of what students can and cannot do (Norman, Caseau, & Stephanich, 1998; [Kumar, Ramasamy, & Stefanich, 2001](#_ENREF_20)). 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 (Haegele, Zhu & Davis, 2016). Physical educators’ overprotective and discouraging attitudes and fears about the safety of students often results in substitution of alternate activities or classes ([Lieberman, Houston-Wilson, & Kozub, 2002](#_ENREF_23)). Difficulties arise in orientation and mobility, both at school and getting to and from school. Students are disadvantaged when using public transport and such difficulties can cause anxiety (Whitburn, 2014c).

Schools provide students with vision impairments specialist equipment including assistive technology, IT and text options. Evidence shows assistive technology is under-utilized 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, 2014b). To fit in, students with vision 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). While the use of assistive technologies can symbolise restriction, difference and dependency, the use of IT is found to symbolise competence, belonging and independence (Kelly, 2011; Soderstrom & Ytterhus, 2010).

**Methodology**

Interpretative Phenomenological Analysis (IPA) was employed in this single participant research into the insider perspectives of a student with vision impairment about his schooling. A single participant 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). IPA has theoretical roots in phenomenology, hermeneutics and idiography. In IPA studies researchers are “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 lifeworld (Smith, 2011; Wagstaff, et al., 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; Tufford & Newman, 2010).

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 was selected for pragmatic reasons as the researchers knew the school had a final year 12 senior student with vision impairment attending. 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 (pseudonym) 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 the independent reading and rereading the interview transcripts by both authors who both completed a line-by-line analysis of the transcripts. Next authors compared and synthesised their marginal notes seeking patterns in the text and linking those into meaningful categories (Calgary, Rathwell & Young, 2015). This individual and shared iterative process ensured deep immersion in the data (Seidman, 1998). Subsequent readings, coding notes and compiling categories lead to the identification of emergent themes. From the emergent themes hypothetical groupings were generated that were then prioritised to form overarching themes that are reported thematically illustrated by direct quotations from the transcripts (Larkin, Watts, & Clifton, 2006; Smith & Osborn, 2003; Southcott & Joseph, 2014).

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, & 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 though space. James stated, “I got put into a space that was massive and it was my 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 and 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 also faced unexpected obstacles/obstructions 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 reflected that,

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 appeared 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 effected 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. 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[[1]](#footnote-1). 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, stating,

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 they were 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 my organization terrible.

James stated that it was not until Year 11 that teachers started to print worksheets in the format he needed, as hisYear 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.

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 the binoculars or a 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[[2]](#footnote-2), 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[[3]](#footnote-3) 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.

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 found 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 final year 12 examinations.

**Discussion**

James’s 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 and complete the same academic workload expected of his peers. Few accommodations which may have assisted were provided. Being more knowledgeable about assistive technology and providing appropriately formatted worksheets may have alleviated some of the difficulties. The lack of use but importance of assistive technology is well documented (Kelly, 2009, 2011) with evidence showing the positive effect of teachers being skilled in this area (Bayram, Corlu, Aydin, Ortactepe & Alapala, 2015; Griffen-Shirley, Parker, Smith & Zhou, 2011). 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 remains a sense that teachers did not fully realise what James was having to cope with. Time was problematic. From his reports it is apparent that little leeway was given and teachers had the same expectations of him as for his peers. While this may be a sound educational approach, encouraging independence, for James it appears teachers may have misread the situation. General teachers who have students with disabilities in their classrooms may have the expectation that someone else have the responsiblity for a student's education (Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993). Rather than procrastinating (as was suggested) James may simply take longer to read and interpret given material (Bardin & Lewis, 2008; [Mohammed & Omar, 2011](#_ENREF_27)) . It was stated he was disorganized, but this exemplifies 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.

The school provided extensive support, including experiences in all aspects of the expanded core curriculum ([Hatlen & Sapp, 2010](#_ENREF_15); [Blankenship, Hatlen, & Lohmeier, 2009](#_ENREF_5); 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 additional curriculum of essential 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 (Smith, Geruschat, & Huebner, 2004). The Visiting Teachers for the vision impaired could take a greater role as advocates 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, and gaining a clearer understanding of social issues are just a few areas that could be could be expounded (Whitburn, 2014a).

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 challenges 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 for James 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](#_ENREF_16)). Inclusion requires transforming educational systems rather than changing children to fit within current, exclusionary systems. (Forlin, 2010; [Jordan, Glenn & McGhie-Richmond, 2010](#_ENREF_17); [Thomazet, 2009](#_ENREF_24); 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.

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1. Guide Dogs is an orientation and mobility service. [↑](#footnote-ref-1)
2. The ClearNote HD connected to any computer produces magnified, high contrast live images of surroundings, such as presentations handouts and white boards. [↑](#footnote-ref-2)
3. Mimio is a portable tool, which when mounted to any whiteboard, allows you to save the notes and drawings directly onto a computer. [↑](#footnote-ref-3)