

Co-enrolment in Deaf Education

Dr Denise Powell

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This report reflects my own thoughts and ideas on investigating the concept of co-enrolment with the potential opportunity to make recommendations for policy and practice regarding Deaf Education within the New Zealand education system.

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Executive Summary

This report contains reflections and conclusions based on key learning experiences and new connections that I made through a Winston Churchill Memorial Trust Fellowship to the United States, Canada, and Australia in March/April/May 2019. The purpose of my fellowship was to investigate the concept of co-enrolment with the potential opportunity to make recommendations for policy and practice regarding Deaf Education within the New Zealand education system.

My own goal in participating in this investigation was to increase my knowledge and skills to be able to provide good leadership in the area of bilingual/ bicultural education for Deaf and Hard of Hearing students. As the coordinator of the Teacher of the Deaf training in New Zealand, having the opportunity to investigate current practices and observe the strategies involved with this particular approach increased my own knowledge and skills. My intention is to pass my learnings on to my students and ultimately influence the inclusive practices they employ when working with their own students in the field of Deaf Education.

My itinerary involved visits to five co-enrolment programmes and one university

- 1) Miles Exploratory Learning Centre Tucson, Arizona
- 2) Department of Disability and Psychoeducational Studies, College of Education, University of Arizona in Tucson, Arizona
- 3) Tucker Maxon School for the Deaf, Portland, Oregon
- 4) Wexford Public School, Toronto, Ontario
- 5) Klemzig Primary School, Adelaide, Australia and
- 6) Toowong State School in Brisbane, Australia.

Through my interactions with these programmes and the generous people who gave me their time, I gained valuable knowledge and learning experiences about the potential for co-enrolment for DHH learners in New Zealand.

Co-enrolment can be broadly defined as educating groups of Deaf and Hard of Hearing (DHH) students with their hearing peers in the same educational environment. It differs from mainstreaming, which usually consists of a single DHH student in a general education classroom, with or without educational or communicative support. Co-enrolment, on the other hand, aims for several DHH students within a single classroom and assumes that all students should be equal participants with equal status in the classroom (Stinson & Antia, 1999). Typically co-enrolment usually involves co-teaching by a regular classroom teacher and a “Teacher of the Deaf” and most co-enrolment programmes are bilingual/bicultural, but they don’t have to be.

There are many schools around the world who are now embracing the philosophy of co-enrolment and each taking this and providing their own version of co-enrolment that suits their funding models and educational goals for their students and there is a growing belief that this model can provide at least a partial answer to some of the pragmatic and philosophical challenges faced in educating deaf students in mainstream educational settings.

The intent of co-enrolment programs is to promote the inclusion of both DHH and hearing students in the school and classroom with DHH students being full members (rather than visitors) to the mainstream classroom. In other words, in co-enrolment classrooms, DHH students are not present provisionally, just as their hearing peers are not present provisionally. The philosophy is one of equal access and full membership. The schools I visited all ‘did it’ differently but had at their core the belief that a significant number of DHH students or ‘critical mass’ must be included as members, not visitors, of the classroom (Antia, Stinson, &

Gaustad, 2002). All the programmes had four features in common previously identified by Marschark, Knoors and Antia (2019, p.326):

- 1) a desire for full integration of DHH and hearing learners in the classroom, as opposed to “the illusion of inclusion”;
- 2) co-teaching and true teamwork by Teachers of the Deaf and general education teachers;
- 3) bilingual education programming; and
- 4) active involvement of Deaf professionals who can serve as role models as well as language models for both DHH and hearing children.

The common theme running throughout the schools visited is the belief in the importance of and the need for direct communication and authentic peer interactions for students who are deaf/hard of hearing (DHH) and to achieve this the need for “critical mass” for DHH kids in school programmes. All schools ran on the model of multi-age grouping (e.g., 1st-2nd grade, 3rd-4th grade) as a way to increase the number of DHH students in a classroom and also allow for the often wide range of academic needs within those age bands.

The schools also provided instruction in a range of modes within the class in real-time. How they did this varied depending on funding, staffing availability and overarching school philosophy. One aspect that is clear from my visits is the huge importance of having the ‘right’ team members working collaboratively to plan and implement the programme but every school I saw had ways of ensuring the delivery was appropriate and fluid.

As with any model there are always challenges. In this case challenges included justifying the perceived resource dense aspect of co-teaching. It is important for the funders to understand that co-enrolment and co-teaching promotes the success of all learners, both deaf and hearing

at costs that are comparable to or less than having DHH students within self-contained or mainstream situations with itinerant support/educational interpreters and teacher aides.

Another challenge related to the fact that worldwide there is a shortage of qualified teachers of the deaf and fluent signers and it is important to be able to maximise the impact this scarce workforce can provide and a co-enrolment model ticks both boxes when it comes to economies of scale and consistency for learners.

The knowledge gained throughout this experience has cemented the belief that co-enrolment should be formally investigated as one of the options to achieving the goals of inclusion for DHH students in New Zealand. The ideas outlined in this report could be incorporated into classrooms and schools in a way that the much-needed reforms should result in educational oversight that includes attention to DHH learners' social capital as well as academic skills.

Introduction

Current situation and why this project is timely

Deaf education services for approximately 2800 children between the ages of 3-21 years in New Zealand is currently provided through two Deaf Education Centres (under a Combined Board of Trustees). These two schools were traditionally Schools for the Deaf with the majority of children attending either Kelston (based in Auckland) or van Asch (based in Sumner, Christchurch) either as day pupils or as boarders. There was a further School for the Deaf, St Dominics, which opened in 1944 (initially in Wellington with a move to Fielding in the mid-60s) to provide a Catholic-based education to deaf children, and ran for 45 years before closing in 1989. Over time, there has been a move away from segregated education and the vast majority of Deaf and Hard of Hearing (DHH) children are now receiving their education in the mainstream education system alongside their hearing peers (Powell & Hyde, 2014).

These changes have in part prompted the upcoming merger in July 2020 of the two schools into one new organisation, identified as Deaf Education Aotearoa New Zealand (DEANZ) until the new school's name is announced in March 2020. With the merger occurring there are discussions taking place about how we best support and educate DHH children and possible changes to service design and roles and responsibilities within this area of specialist teaching. In New Zealand, all Resource Teachers of the Deaf (RTD) are employed by DEANZ. Therefore, the idea of investigating a different service provision option (co-enrolment) is something that can be done nationally and is a unique opportunity due to the fact there will be only one national provider of educational support for DHH learners in the very near future.

As mentioned, most DHH children (approx. 95%) are mainstreamed at their local school either with or without specialist support (Powell & Hyde, 2014). The model of inclusion adopted by the New Zealand Ministry of Education in their Special Education in New Zealand: Statement of Intent (1991) and rapid changes in technology have fed into these increased mainstream placements. Early detection of a child's hearing loss partly brought about by the adoption of a nationwide Newborn Hearing Screening protocol, increases access to timely and appropriate early intervention. Combine this with technological advances of hearing aids and the high use of cochlear implants means that many profoundly deaf children may be functioning like a child with a moderate/severe loss, and therefore, more able to 'fit in' to mainstream hearing classes (Mayer, Miller & Cocks, 2009). Although many people and groups applaud the right of children with disabilities to attend their local school, some groups, including the Deaf¹ community, have mixed feelings about the success of such moves for deaf children (Antia & Kreimeyer, 2015; Ladd, 1994, 2005; McKee, 2001; Padden & Humphries, 1988, 2006). These groups believe that DHH students can be socially and linguistically isolated in environments where they are the only DHH person, as even with the best technology available, deaf children can never be hearing children (Marschark & Hauser, 2012). The purpose of this investigation was prompted by the question of how we facilitate the development of an environment that is conducive to the educational and social achievement of DHH learners that complies with New Zealand's responsibilities specifically under Article 24 of the United Nations CRPD (2007) which states:

3. States Parties shall enable persons with disabilities to learn life and social development skills to facilitate their full and equal participation in education and

¹ *Deaf vs. deaf*: An upper case "D" is used to refer to Deaf people who have a culture and sign language that are distinctive, and identify with the Deaf community. The use of lower case "d" indicates a broader definition, referring for convenience to all degrees of hearing levels, which may include Deaf people who are members of the Deaf community and those who are hard-of-hearing.

as members of the community. To this end, States Parties shall take appropriate measures, including:

b) Facilitating the learning of sign language and the promotion of the linguistic identity of the deaf community;

c) Ensuring that the education of persons, and in particular children, who are blind, deaf or deafblind, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximize academic and social development.

So what does inclusion for deaf students currently look like? It can include; withdrawal from the classroom for one to one work (pull-out model), and/or the RTD may co-teach alongside the classroom teacher or work with the child and their peers (push-in model). Communication could be in the form of watching an interpreter or Communication Education Support Worker (CESW) who provides access to the information being spoken and interprets the learner's signed input, and/or it may mean relying on imperfect speech and hearing generally with the assistance of technology (hearing aids, FM amplification systems, or cochlear implants).

It is taken for granted that learners will have continuous and easy access to language, but for learners who are DHH who are either unable or struggling to hear, a "virtual glass wall" separates them from the ongoing exchange of thoughts and ideas, despite the fact that their spoken language may appear to be quite well developed (Oliva, Lytle, Hopper & Ostrove, 2016). This affects their learning every single moment of every single day. We need to be aware of this "glass wall" on the educational and social-emotional development of DHH students in mainstream school settings and consider how we could improve access to education and friendships in a way that is authentic and sustainable.

The importance of social capital

Merely being physically ‘present’ is not the same as being ‘included’ or belonging. A troubling ambiguity is that the term ‘inclusive education’ is often used to describe only physical placement in a mainstream classroom, rather than a learner’s full participation in all aspects of school life including extra-curricular activities. Belonging and connection arise out of shared experiences and relationships with others as well as sharing spaces, and as such, it is much more than just removing barriers to space and place (Drolsbaugh, 2013).

In the context of DHH learners, it is worthwhile considering two kinds of social capital described by sociologist Robert Putnam (2002). The first was referred to as “Bonding social capital” and is built between people who are similar to one another in certain ways. For example, age, gender, race, socio-economic status etc. We can assume bonding social capital is the kind that develops when isolated DHH individuals find others like themselves— the commonality of hearing status becomes a basis for bonding social capital.

The other form of social capital is “bridging social capital.” This is the type of social capital that develops between individuals who are different from each other in significant ways, in this case, deaf and hearing. Both forms of social capital are important because they help to build strong connections to communities and to individuals within the communities.

If we think about DHH learners in mainstream education settings the concept of social capital is of relevance. Just being in the same physical environment does not automatically result in social connections if the groups lack the language to communicate deeply (Keating & Mirus, 2003). Oliva (2004) coined the word “solitaires” to describe DHH individuals who are the only DHH person in their school or social world. The word itself gives a very real sense of isolation and loneliness that is often expressed by people who struggle to ‘hear’ in a hearing world.

Although DHH students may have cochlear implants and/ or classroom interpreters/CESWs, neither the implants nor the interpreters/CESWs provide full access to all, or even most of the conversations that take place beyond direct teacher-student conversation (Oliva, et.al. 2016). According to Marschark and Hauser (2012), a child with an implant hears about as well as his hard-of-hearing grandfather. Thinking of the classroom discourse and the verbal exchanges and interactions going on between peers every single day, it is blatantly obvious that DHH students are missing out and/or having to work extremely hard just to ‘stay in the loop’. The loss of information and subsequent connections is huge.

Conversations in mainstream environments between DHH and hearing peers have been shown to be reasonably superficial and unidirectional with little reciprocity. This aspect is an important part of social capital as without it there is not much opportunity to develop deep connections and relationships that are long-lasting and meaningful. In 2003, Keating and Mirus published research that reported on observed interactions between deaf and hearing elementary students in their school setting for 5 months. Significant differences in interaction patterns were found that left the deaf children spending “relatively long periods of time as nonparticipants in interaction while hearing children were continually engaged in lengthy and complex verbal interactions” (p 129). In addition, they noted significantly less turn-taking by the deaf children (the deaf children had significantly fewer opportunities to say something or contribute) and turn-taking interactions were briefer in duration. These researchers go on to say:

We suggest that just as deaf children are expected to be accommodating to hearing children, hearing children in classes with deaf children should be expected to develop comparable skills for interacting with deaf students in order to enrich peer interactions and enable the deaf students to have equal access to all learning opportunities (p.131).

In another study Ramsey (1997, cited in Oliva et.al, 2016) observed a class of 7-year-olds for a year and described how hearing classmates mostly gave directives to their DHH peers for example, “turn to page 20” or “the teacher said ...” but did not genuinely converse with them. In formal classroom settings, DHH students possibly find things a bit easier, particularly with teacher-directed instruction as opposed to group work and class discussions. This type of education in New Zealand is becoming less common with the preference for interactive and group learning being the norm.

Many children with a hearing loss who struggle to hear rely on vision as the most accessible pathway for full access to linguistic information and use sign language to communicate (Mayberry, 2007). The results of a recent New Zealand study identified the fact that, for the majority of DHH students who use New Zealand Sign Language (NZSL), the adults who they interact with regularly (i.e., teacher aides and resource teachers of the deaf) are not skilled and fluent NZSL users (Powell, Boon & Luckner, 2019). Simply having ‘someone who signs a bit’ may not be providing the access we think it is, either to the curriculum or to the rich reciprocal communication with their hearing peers. Furthermore, in classes where they are the only DHH student the responsibility of navigating communication barriers in the classroom is often placed on the learner themselves rather than being the responsibility of all participants.

There is a critical need to build both bridging and bonding social capital for learners who are DHH. Bridging social capital enables these students and their hearing peers to connect on meaningful levels so that reciprocity can be developed. Connecting DHH students with each other builds bonding social capital for strong identity and awareness of common issues and remedies. A requirement for the development of both is the ability to engage easily in regular, frequent, and ongoing conversation with others.

Bonding social capital is so important. In the last few years in New Zealand, we have been trialling NZSL immersion hubs or Deaf day schools. Recently, in 2017-2019, I was the lead teacher for a one day a week NZSL immersion hub in Dunedin. The learners ranged in age from 5-14 years with communication modes that covered the whole spectrum from NZSL being the only language, to fully oral communicators (and every combination of communication in-between). What was so amazing for me and the other staff to observe was the growing sense of connectedness (or bonding social capital) that these days provided for these learners. Being with kids who are 'just like me' has been incredibly powerful for these children and this helps develop a sense of identity and belonging. The DHH environment provides an opportunity where they can use their energy to be themselves, rather than having to put all their effort into identifying communication opportunities, or wondering if they have misunderstood what was said. Friendships with other DHH individuals are critical because they become a protective buffer against the rejection often found with hearing peers because of the sense of confidence and emerging identity they help provide (Bat- Chava, 1993; Oliva & Lytle, 2014).

Although being aware of, and making arrangements for, a deaf or hard of hearing child's need for bonding social capital, certainly there is a need for bridging social capital as well. Because bridging social capital is built between others different from ourselves, it often presents more challenges. When communication barriers exist, the challenges become even greater. To ensure bridging capital is enhanced, we need to be looking at DHH students' involvement with their hearing peers in general education settings.

If we are to achieve better outcomes for deaf students we need to incorporate innovative teaching methods and interventions that produce and increase in student achievement both academically and socially. Currently academic achievement overall is poor with most learners who receive services working at NZC Level 1 or 2. These learners are achieving at a

considerably lower level than their hearing peers. It is important for us to start considering how we facilitate the development of an environment that is conducive to the educational and social achievement of these deaf learners that comply with our responsibilities specifically under Article 24 of the United Nations CRPD (2007) and looking for a possible answer that combined the benefits of mainstreaming and a sense of connectedness to ‘kids like me’.

This is not necessarily to suggest a form of “exclusion” is required, but rather a structure of inclusion that respects the retention of certain individual or group characteristics by including a ‘critical mass’ of DHH learners.

And all this got me thinking.....

Co-enrolment

There is a growing body of evidence that the provision of co-enrolment could lead to changes that enhance DHH students’ participation so that they are better able to reach their academic and social potential. Co-enrolment can be broadly defined as educating groups of DHH students with their hearing peers in the same educational environment which sees each member of the class as equal participants (Marschark, Antia & Knoors, 2019). Other studies have identified that co-enrolment can decrease the chances of loneliness and isolation by increasing the likelihood that DHH students will be accepted by their hearing peers more easily (Wolters, Knoors, Cillessen & Verhoeven, 2011; Xie, Potměšil, & Peters, 2014).

Co-enrolment differs from mainstreaming in that most classes usually have a single DHH student with or without educational and/or communicative support. Co-enrolment, on the other hand, has several DHH students within a single classroom and assumes that DHH and hearing students should be equal participants with equal status (Stinson & Antia, 1999). Co-enrolled classes are often bilingual in sign language and spoken language, but they don’t have to be. Typically co-enrolment involves co-teaching by a regular classroom teacher and a

“Teacher of the Deaf”. Both teachers are responsible for all learners and bring with them different strengths and expertise which they use collaboratively to provide the best possible learning environment for all students in their class.

A key aspect of a co-enrolment program is that, through direct teaching and exposure, all students (DHH and hearing) develop empathy, acceptance and an understanding of each other’s individual strengths and needs. As Specht (2013) notes, “In order to create a sense of belonging in our classroom, we need to help students with their social and emotional learning. This is an aspect of teaching that is essential to create the acceptance of diversity in our classrooms”. By providing access in this way the aim is to integrate DHH students with their hearing peers without the need for additional support services or modification of instructional methods and materials.

There are currently co-enrolment programs in a range of countries including the United States, Canada, Europe, Asia and Australia, and there is a “growing belief that this model can provide at least a partial answer to some of the pragmatic and philosophical challenges faced when educating deaf students in mainstream educational settings” (Antia, Knoors & Marschark, 2019, p. 3). Therefore, co-enrolment has the potential to enhance the provision of New Zealand based services to DHH students in order to replicate a setting which acknowledges the cultural and linguistic conditions required to create an equitable learning environment.

Co-enrolment programme visits

In March/April 2019 I spent three weeks in the USA and Canada visiting three different co-enrolment programmes; Miles Exploratory Learning Centre in Tucson, Arizona; Tucker Maxon School for the Deaf in Portland, Oregon and Wexford Public School in Toronto Canada. I also spent time at the University of Arizona with Professor Shirin Antia and her

team who have been involved with co-enrolment research for the last 20 years. Then in May 2019, I travelled to Australia to visit two other programmes; Klemzig Primary School in Adelaide and Toowong State School in Brisbane.

The first programme I visited was Miles Exploratory Learning Centre (Miles ELC) in Tucson, Arizona. <http://miles.tusd1.schooldesk.net/>



Figure 1 Year 3/4/5 class at Miles Exploratory Learning Centre working with Gen Ed teacher on maths activity.

The school provides education from Kindergarten to grade 8 and all students at this school enrol through an open enrolment system. This means that all students must apply to enrol at the school, therefore it is not a typical neighbourhood school and means that there has been a conscious request to attend. Various schools in the district have different focuses and at Miles ELC one of their points of difference is the focus on inclusion and co-enrolment. In addition, there is a strong emphasis on hands-on and inquiry-based learning. Learners who are DHH do have priority acceptance and are entitled to transport assistance.

Miles ELC initially had a separate self-contained classroom for DHH students. However, in 1995 nine DHH students were integrated into a composite second, third and fourth-grade

class with 19 hearing students co-taught by a teacher of the deaf and a general classroom teacher after several teachers from the school visited the TRIPOD programme in California. So began co-enrolment at Miles ELC. There are currently 297 enrolled students and 34 of those identify as DHH. Today three of the classes are co-enrolled and are mixed-age classes (K/1/2) (1/2/3) and (3/4/5). Most DHH students are in one of these classes but there are 6 students who currently are either in the pre-school or middle school (6/7/8) classes that are not co-enrolled environments, although they do receive DHH support services according to their identified needs. In 2020, due to increasing numbers of DHH students there will be an additional (3/4/5) class.

Table 1: Number of DHH and Hearing children in each class at Miles

Class level	Number of DHH students	Number of Hearing students
K/1/2	10	20
1/2/3	7	24
3/4/5	11	20

Each co-enrolled class has 2 teachers, 2 interpreters and share a floating teacher aide. Every classroom in the school also has a sound field system which amplifies the speakers' voice for all students. In addition, DHH students may also wear individual FM systems which link directly to their hearing aids or cochlear implants. At Miles ELC the communication philosophy is that multiple communication modalities are used to meet the individual needs of each student. These include the full spectrum of communication methods from American Sign Language (ASL), through sign supported English to spoken and written English alone. All teaching is delivered in spoken English and (ASL) with one person typically speaking and a second signing. This could be one of the teachers with an interpreter or the two teachers working together. All students and staff are expected to develop their sign ability and many

of the hearing students become proficient in sign language. The school also provides speech therapy, audiology, physical therapy and occupational therapy as part of a students' Individual Educational Plan (IEP) requirements.

The second school was Tucker Maxon in Portland, Oregon. <https://www.tuckermaxon.org/>



Figure 2 Learners on the mat during the morning programme at Tucker Maxon with ToD and Educational Assistant

This school is a private School for the Deaf that accepts hearing students in order to provide a co-enrolment model. Tucker Maxon is an auditory-verbal school which means that spoken language with a strong emphasis on amplification (hearing aids, Cochlear Implants and FM systems in all classrooms) is the mode of communication and instruction. The website states “While we respect all forms of communication and a parent’s right to choose what is best for their child, sign language is not a part of our curriculum”. Interestingly though I was told they do provide a sign language club as part of the after school programme. There are 88 students enrolled at Tucker Maxon currently with 28 identifying as DHH, so approximately a 1:3 ratio of DHH/Hearing.

Due to declining student numbers in the early 1980s, the school had rented space to a programme called Childsworld and the first foray into co-enrolment involved 6 DHH students integrating into a Childsworld classroom of approximately 14 students on three days of the week in the mid-1980s. Tucker Maxon began offering official co-enrolment in 1996 and while this initially consisted of an early childhood teacher and a teacher of the deaf this model was deemed too resource dense to maintain. Since 2002, all classes at the school are co-enrolled and are taught by a qualified teacher of the deaf with a full-time educational assistant. The school also has a “floating” ToD who provides push-in/pull out support throughout the day. The teacher/student ratio is approximately 8:1 and there is extensive additional support available. Each DHH student has 100 minutes individually with a teacher of the deaf per week as well as 60 minutes with a speech-language therapist. All classrooms are fitted with sound-field and Phonak Roger systems which are synchronised to students’ technology (CIs or HAs). The school also has an onsite audiologist, early intervention specialist, and science, art and physical education teachers. In addition to this children are actively involved in the organic garden at the school and help care for the chickens and goats. This was the first school I have visited that required ‘watch where you step’!



Figure 3 Goats and chickens in the playground at Tucker Maxon

The third school was Wexford Public School in Toronto, Canada

<https://schoolweb.tdsb.on.ca/wexford/>



Figure 4 Learners seated in a circle on the mat with ToD at language time at Wexford

Wexford caters for children from preschool to grade 8. It houses the original preschool program for three-year-old children who are DHH, a Parenting and Family Literacy Centre and, very recently, a one of a kind Family Drop-In pilot program for parents and children who are DHH. The co-enrolment programme was established in 2009 with DHH students in pre-school/kindergarten/Year 1 being transported in from their homes in the surrounding school district by bus. Currently, the Junior Kindergarten(JK)/Senior Kindergarten (SK) has 22 children, 9 of whom are DHH and is staffed by a teacher of the deaf, an educational assistant and a kindergarten teacher.

After two years of experience in the co-enrolment programme, it is thought that students who are DHH will more likely be ready to succeed in their home schools and transition to the mainstream at this point. If children are not quite ready to transition to their home school options are discussed for Y1. The teachers of the deaf at this school would like to extend the programme by an extra year, from pre-school to Y 2 as they believe this model provides a very solid language base and a strong foundation for future learning. The communication philosophy at Wexford is that multiple communication modalities are used to meet the

individual needs of each student. These include sign language, sign supported English or spoken English alone. All teaching is delivered in spoken English and sign language and the class is fitted out with a sound field system as well as FM system for children with hearing aids or Cochlear Implants. Staff believe the strength of this programme is the flexibility and is seen as a transition to inclusion pathway. In 2018, this co-enrollment programme received an honourable mention in the National Ken Spencer Award for Innovation in Teaching and Learning which recognizes innovative work that is sustainable and has the potential of being taken up by others and to encourage a focus on transformative change in schools.



Figure 5 Children from Wexford co-enrolment class with their teacher and the Ken Spencer Award they won

Their video can be viewed here <https://youtu.be/1ayDZogt8Po>

In May 2019, I visited two schools in Australia. The first was Klemzig School in Adelaide which considers itself a bilingual school. <http://www.klemzigps.sa.edu.au/index.htm>



This school was established in 1960 and today includes the Klemzig Primary School, Centre for Deaf Education and the Auslan Bilingual Preschool for the Deaf. Klemzig currently has a total roll of 221 students, 36 of whom identify as DHH. Co-enrolment started 20 years ago at Klemzig with the DHH students who had previously been taught in the self-contained unit at the school being mainstreamed into the main school. Currently, each class is a two year composite class with a minimum of 4 DHH students in each class.

In 2019, seven out of the eight primary classes (Reception/ Year 1, Y1/2, Y2/3, Y3/4, Y4/5, Y5/6 and Y6/7) as well as the preschool were bilingual. There was a single Y5 class which was not bilingual. The school roll is growing however and in 2020 there will be 2 x R/Y1 bilingual classes because of the increase in numbers of DHH children (3 DHH in Y1 and 3 DHH in Reception).

In all bilingual classes, the curriculum is delivered in both English and Australian Sign Language (Auslan) allowing students the option of accessing the curriculum in their preferred language. Learning opportunities are offered by two teachers in each class simultaneously, in both spoken English and Auslan and the school has a strong sign language focus for all students. Their Context Statement (2018) includes the following

Improve Auslan language for students, enrolled in the CDE Years 3 – 7, leading through discourse development and grammar. We will collaboratively develop, implement and review a common evidence-based approach to teaching personalised Auslan. From an analysis of receptive and expressive language the majority of students, without additional disabilities, will move from the 25th percentile to the 50th percentile or higher as measured by the Auslan Assessment tool led by the ToD learning community (p5)

Many of the classes also include Children of Deaf Adults (CODAs) or hearing siblings of DHH students which serves to boost the number of users of Auslan. As mentioned previously, each class is resource-rich, taught by a teacher of the hearing and a teacher of the deaf as well as having Bilingual School Support Officers (BSSOs) available. Educational interpreters are not present as they are only used in high schools in South Australia (SA). In SA a student who has a 40 DB+ hearing loss in their better ear is entitled to .25 ToD and .25 BSSO or a 1:4 ratio which is how funding for this type of programme is assured, as long as there is a consistent number of students entitled to this kind of support at the school. The school finds that by having composite classrooms they can mostly achieve this.

(Also) By having composite classes we can have a mixture of age and ability levels. For example, we may have 1 x Y5 DHH student, 2 Y6 students, 1 Y7, and 5 Y4 students. Depending on their language and cognitive abilities we could do a number of class set-ups, e.g. Y5/6/7 class or Y4/5 class (S. Kelly, personal communication 14.1.20)

This school had a major rebuild in 2014/15 and used design principles that were Deaf friendly. The first photo below shows the clear lines of sight available (including classrooms

oriented around a large common area), acoustic baffles to dampen noise, as well as a state of the art air conditioning system that is completely silent to reduce background noise.



Figure 6 Common area between classrooms at Klemzig with Deaf friendly design features

The second photo shows the new pre-school area which again has clear lines of sight and very good natural light.



Figure 7 The new bilingual pre-school space at Klemzig.

The final school was Toowong State School in Brisbane.

<https://toowongss.eq.edu.au/Pages/default.aspx>



Figure 8 Children at Toowong taking part in a lesson with playdoh

Toowong has a current roll of 353 students, 33 of whom identify as DHH. Unlike many schools that embrace co-enrolment, this school did not initially have a stand-alone provision for deaf students. Instead, the bilingual/ bicultural co-enrolment programme started with 5 deaf children being enrolled in a single year 1 class in 2001 and was phased in over six years until it was offered at all levels across the school. Its founding principles included the provision of equitable access to the curriculum through Australian Sign Language (Auslan) and English, in both spoken and written forms. Classes are 2-year composites (y1/2, 3/4, 5/6) and there is one class at each level that is a co-enrolled classroom staffed by two teachers, one a Teacher of the Deaf and the other a general classroom teacher. They also include a Teacher Aide: Auslan Language Models (TA:ALM) who are Deaf adults fluent in Auslan, and when needed Educational Interpreters.

Table 2: Number of DHH and Hearing students in each co-enrolled class at Toowong

Year	# of DHH students	# of Hearing students
Prep	5	25
1/2	6	14
3/4	6	18
5/6	8	20

Because this is a state school parents have the option of enrolling their children in a co-enrolled class or a regular class as the school understands that not all parents wish to have their children educated bilingually. However, the school's website states:

Cultures of both Deaf and hearing communities are valued and form an important part of the school program. Children enrolled in a bilingual/bicultural class have the most exposure to the two languages and cultures however all students are involved in some way, for example, school assemblies are always interpreted and all children sign the national anthem. Auslan is taught to all children in the school.

It is interesting to note according to that approximately one-third of the school population has a strong connection to deaf people and the Deaf community when Children of Deaf Adults (CODAs) (5%) and siblings of deaf children (17%) are considered (C. Gamin, personal communication, May 2019). Also of note is the growing school roll which includes an increase in DHH students being enrolled and because of this in 2020, there will be an additional co-enrolled class added, making five in total.

The communication philosophy at Toowong is that all children have access to multiple opportunities to learn in both languages including spoken, signed and written forms. Adults are expected to communicate a message in Auslan, Sign Supported English (SSE) and/or in

spoken English and then chain it to written text. Educational Interpreters are rarely used to access learning as there is a high value placed on direct teaching “Every child has the right to learn directly from the teacher” (ToD, bilingual classroom teacher, 2019). It is for this reason that Auslan is taught as part of the Languages Other Than English (LOTE) to all students in the school and teachers are expected to continually increase their own Auslan skills.

Key Learnings

In this section, I will outline the key learnings I identified from my observations and discussions throughout my fellowship, in order to provide some key recommendations for Deaf Education delivery options in New Zealand.

Firstly, it is interesting to note that many co-enrolment programmes around the world started around twenty years ago and took their lead from a programme called TRIPOD and the educational philosophy that developed during the 1970s in California. In 1984, the first co-enrolled private tuition-free pre-school opened based on Montessori principles of a child-centred approach and a Total Communication philosophy which promoted the use of a range of language modes including sign language, spoken language and sign supported English. In 1989 the TRIPOD programme moved from the private sector to the public school sector in Burbank, California and the term co-enrolment was coined (Kirchner, 2019).

All the schools I visited had at some point been in contact with TRIPOD either visiting in person or requesting more information about the philosophy and programme logistics. Sadly, I was unable to visit the TRIPOD programme myself, as, since the retirement of the key person who was part of the initial vision of co-enrolment, the TRIPOD programme has faltered. However, other schools around the world are embracing the philosophy and providing a version of co-enrolment that suits their funding models and educational goals for

their students and continue to develop this model in a way that suits their own set of circumstances. As a result of my fellowship experiences, I believe Deaf Education in New Zealand should be a part of this movement.

The five programmes had the following features in common; 1) a genuine desire for all children to be included, 2) the provision of truly collaborative teamwork by teachers of the deaf and general education teachers or in some cases educational assistants, 3) a strong commitment to direct teaching and communication and 4) authentic engagement with the Deaf community who provided their knowledge and experience as well as active involvement as language models for all students in the class. However, how they achieved this differed depending on their own and their students' particular contexts.

The "Illusion of Inclusion" and "Critical Mass"

The common theme running throughout these schools is the firm belief in the importance of, and the need for, direct communication and authentic peer interactions for students who are DHH. To achieve this there is a need for a "critical mass" of DHH learners within the school programme. The term "critical mass" used in this context means having enough people in the same classroom with sufficient commonality in their communication modes and characteristics to enable direct interaction opportunities among peers and adults. The consensus around 'how many is enough' varies though, with many recommending a ratio DHH: Hearing between 1:3 and 1:4 or DHH students making up 20-30% of the class. For others, the concept doesn't imply that all of these communication partners are DHH themselves as can be seen from the information about Toowong State School's student characteristics located above. Siblings of DHH students and CODAs play an important part in this environment. It was interesting to note that some of the ToDs and Gen Ed Teachers in the programmes I visited also fell into these two categories being CODAs or siblings themselves.

Unlike their DHH peers in more typical mainstream settings, DHH learners in co-enrolled classes have opportunities to interact with same-age DHH and hearing peers and can develop friendships based on common interests rather than on hearing status or communication ability. There is also a “Matthew Effect”: that is, linguistic skill has been shown to correlate with popularity in young children, and interaction between peers has a significant and positive impact on language development (Albers, 2013; Mashburn, Justice, Downer & Pianta, 2009).

This is why it is vitally important that all students and teachers see it as their responsibility to develop the skills needed to communicate directly with their peers and students thereby providing the “critical mass” needed. To achieve this, some schools I visited had compulsory sign language classes and/or activities or clubs at least weekly to provide additional opportunities for learning. Clearly, there is a need for ‘buy-in’ throughout the whole school structure with a strong belief in the benefits of co-enrolment being held right from the senior team and leaders of the school through to the teachers, teaching assistants, support staff and parents.

The model of multi-age /multi-level grouping of either 2 or 3 years (e.g., Y1/2, Y3/4/5) was used as another way to increase the number of DHH students in a classroom but this also allows for the often wide range of academic needs within those age bands as was highlighted by the comments from Sandra Kelly at Klemzig School in Adelaide. With more flexibility around the levels of curriculum available within each class, students are able to work on the curriculum at their individual level without being seen as ‘advanced’ or ‘behind’.

I was also struck by the peer teaching and scaffolding provided by the more capable or older students in the classes I visited. This not only provides support for students who are

struggling but also teaches students how to explain what they know or how to complete a task, to someone else, which are extremely valuable skills to develop.

Within the programmes that had co-teaching situations, there was a strong preference for the same teachers to stay with the students for at least 2 if not 3 years. Teachers I spoke with identified that working with learners over a period of years means there is no ‘getting to know you’ period at the start of each year with all students in the class because teachers know where to start academically with students they have had in their class the previous year. Additionally, older students were aware of class routines and expectations which meant an easier transition ‘in’ for the new cohort of students as “2/3rds of the class already know what to do and everyone can just get on with the business of learning” (teacher, Miles ELC, 2019).

Variety of Communication Modes

All teachers working in co-enrolled classes saw the value of educating DHH students with their hearing peers and valued the range of communication modes each individual brought to their learning. With the exception of Tucker Maxon, all schools provided instruction in a range of modes within the class in real-time. How they did this varied depending on funding, staffing availability and overarching school philosophy. For example, in order to meet the individual communication needs of students at Miles ELC there is a ‘rule’ that communication must be accessible to everyone:

If you only sign – use an interpreter to talk with people who can’t sign, if you can only talk – use an interpreter with people who don’t understand talking. It’s the rules. I can sign and talk so I’m ok! (9-year-old student, Miles ELC, 2019)

I saw this in action and the ‘rule’ was well understood, even by young children. In order for this to work obviously, there need to be interpreters (or other people able to provide communication) available. At schools that employ interpreters, there are always interpreters

available through breaks and lunchtimes to ensure students have access at these important times as well. However, due to the fact that so many of the hearing students have good sign language skills themselves the demand for interpreting services is infrequent.

Most programmes I visited tended to employ Teacher Aide: Adult/Auslan Language Models (TA: ALMs) or Bilingual School Support Officers (BSSOs) who had good sign language fluency rather than qualified interpreters. For example, in South Australia, Klemzig employed 13 BSSOs to work in their 7 classes, many of whom are parents and it was heartening to see a few Dads working in these positions. When Educational Interpreters were employed, they tended to be in the high school environment or brought in for special events such as assembly or prize giving, apart from Miles ELC where two qualified interpreters are assigned to each class and an additional interpreter who 'floats' as required.

Role of the Educational Interpreter

From the conversations I had with interpreters a reasonably clear idea was obtained of the huge amount of flexibility required to work as an educational interpreter in the primary education setting, as well as the very important fact that they are considered to very much be part of the teaching team. This team approach requires interpreters to have knowledge of the curriculum and understand the needs and educational abilities of all students in the class.

Tasks that were undertaken that I observed mostly consisted of real-time interpreting for teachers and students as well as providing language support for all students in 1-1 and small group situations. It was interesting to note the skills used to also explain concepts, rephrase or break-down information and provide language scaffolding as required. I also observed them working as teaching assistants with small groups. Other examples included:

- Interpreter seeing that a learner was confused about instructions encouraged and supported the student to approach the Gen Ed teacher.

- During an exploratory play session with shapes, the interpreter was moving around groups and asking questions about the shapes and feeding in vocabulary.
- Interpreters listening to learners' reading
- Interpreter prompting child having difficulty responding to question 'why is he crying' by adding 'use your imagination'.

Stepping in and out of a strict 'interpreter' role was something these interpreters (who were experienced in working in co-enrolled classes) did seamlessly and reinforced the fact that they truly are an important part of the teaching team.

The ultimate goal of course in co-enrolment settings is direct communication both between teachers and their students and between classmates. Not all students or teachers may realistically be able to achieve fluency quickly in sign language and so interpreters and TA:ALM/BSSOs can fill the gap. Even at Miles ELC where interpreters are used as part of the teaching team, direct communication was expected although there was a fluidity around this. For example, in one class where both teachers (ToD / General Class teacher) had good sign language skills the following was observed: when they were giving general instruction to the whole class, they both used an interpreter; when working with DHH students directly they signed, and when working with mixed groups they used Sign Supported English. In another class where the general class teacher did not have the level of skill required she used an interpreter but she was also using SSE at times.

Co-teaching

One aspect that is abundantly clear from my visits to these programmes was the huge importance of having the 'right' team members working collaboratively to plan and implement programmes. The sheer number of people involved throughout the day requires a very cohesive plan for who will teach what and how. Juggling the wide variety of roles

within the class and the significant number of adults in the room at one time was at times truly a feat of logistics. Two teachers, one or two educational interpreters, any number of support staff such as TA:ALMs, BSSOs or Teacher Aides in a class of 25-30 children is a lot to co-ordinate but every school I saw had ways of ensuring the delivery was appropriate and fluid. I was surprised at how 'well oiled' these teams were and the fact that even though there was a significant number of adults in the room, they did not dominate. It was all so seamless!

Co-teaching is not something that works for everyone. Teachers have to be willing to work collaboratively and see each other as equal partners in the class. They also have to be committed to the idea that both teachers are responsible for all students rather than the ToD working mainly with the DHH students and the general education teacher working with the rest. One of the recurring themes from interviews with the teachers was the amount of time required for planning over and above 'normal' planning time available to be truly teaching as a team. At one school, for example, there is an additional planning day per term allocated to those teachers working in co-enrolment classes as an acknowledgement of the extra time required to not just plan but to develop a shared teaching philosophy and craft a relationship that can stand the test of time. Another school provides two 120 min planning periods a week. At Miles ELC I had the privilege of observing a team that had worked together for the last 18 years! One of the teachers commented that she spent more time with her co-teacher than she did with her partner and that the relationship had to be robust, based on mutual respect and trust. An additional benefit of the longevity of successful teaching teams is that "as time goes on the amount of time required for planning does decrease!" (Teacher, Toowong, 2019). Several of the teams I spoke with reiterated these thoughts and believed that teams should stay together for a minimum period of 2-3 years, but preferably longer to really reap the benefits. There was also the suggestion that teachers should be able to choose their own co-teacher as often decisions made by administrators about who should work together was not as

successful. When a team works well there are positives for everyone. The students have two teachers with whom they can connect and have their individual needs and learning styles recognized and the teachers have a colleague they can learn from throughout the day.

“Observation of good practice isn’t possible in a single teacher class and is one of the definite advantages of team teaching” (teacher, Miles ELC, 2019).

Several of the teams I spent time with also indicated that it was very important that co-enrolment was a “grassroots up” approach. In other words it needed to have its roots in a teaching staff that believed in the philosophy and pedagogy of co-enrolment rather than it being something that is ‘imposed’ on staff. When several of the programmes I visited initiated co-enrolment classes there was a portion of the staff who decided this model of co-teaching and co-enrolment was not for them and they moved on. What these schools have been left with are fully committed and passionate teachers who believe in the outcomes co-enrolment can bring to all students in their class. New teachers coming into these programmes are those who are attracted to new ways of working collaboratively in a fully inclusive environment.

It was also seen as vital to have parental support. At Miles ELC all learners have to apply to attend this school and therefore parents actively chose an environment of co-enrolment for their children. The same happens in Toowong where parents can chose to have their children in co-enrolled classes or not.

Technology

Hearing technology is also seen as ‘the norm’ in co-enrolled classes. Whereas, as an only student with a hearing difference in a mainstream class, hearing technology can be viewed negatively as it singles out the DHH child. This may cause the child to feel self-conscious or ‘different’ leading to social isolation or reluctance to wear the technology that benefits their learning. In programmes I visited classroom sound field systems (which include handheld

microphones that could be passed around to children who were speaking) and other FM transmitters were something seen to benefit all students and typically both they and the staff saw these as 'business as usual'. There was no reluctance from the teachers to 'wear the mic' as I have observed in many mainstream classrooms. In other words, there was nothing unusual about hearing technology being incorporated into the everyday running of a class.

Role models

All children need to have role models, people they can relate to and look up to in order to develop socio-emotionally and a sense of identity (Nikolarazi & Hadjidakou, 2006). Role models are usually part of a child's everyday life and include family members, teachers and others like sports coaches. These people are usually ones that the child can identify with in terms traits they have in common. Most DHH children are born into hearing families and as such many never have met a DHH adult. There are anecdotal stories of children believing that when they grow up they will a) become hearing or b) die because they have never met a deaf adult. Experience with adult deaf role models allows children develop schemas for their daily lives based on what they see the adults in their lives do and this helps develop tools and strategies necessary to develop into a well-rounded person.

One of the most heartening things I saw throughout my visits was the huge range of Deaf role models present within the co-enrolment environment. These ranged from Deaf teachers of the deaf, hard of hearing general education teachers, Deaf TA:ALMs, BSSOs and support staff such as office workers and groundskeepers. It is so empowering for DHH learners to see themselves reflected in the adults around them and for the hearing learners to see deaf adults working successfully in an educational environment for all the reasons stated above.

Challenges

Funding

As with any programme that is seen to be 'resource rich', funders often need to have explained the benefits of having both a general education teacher and a teacher of DHH within a co-enrolment classroom. Certainly this was a theme repeated by every administrator I spoke with at all 5 schools. In Arizona my visit was used to emphasize the fact that people 'from the other side of the world' were coming to investigate this model and had chosen Miles ELC because of the proud and successful history of co-enrollment. It is important for the funders to understand that co-enrolment and co-teaching promotes the success of all learners, both deaf and hearing at costs that are comparable to or less than having DHH students within self-contained or mainstream situations with itinerant support/educational interpreters and teacher aides.

At Toowong, the point was made that co-enrolment requires a different funding model. Instead of spending money on allocating TA funds based on individual child needs as is the norm in mainstream situation, funding needs to be prioritized towards employing teachers who are open to developing bilingual/bicultural and co-enrolment pedagogical skills. These teachers also need to be committed to working at part of a collaborative team.

In South Australia, Klemzig School structures their classes with a minimum of 4 DHH learners so the funding allocated to DHH learners with 40DB+ loss in their better ear as of right (.25 ToD and .25 BSSO) equals a full-time ToD and a full-time BSSO. The increasing numbers of DHH students enrolling at the school means that in 2020 they will be able to have 2 x Reception/Y1 bilingual classes. Other schools, such as Tucker Maxon, found that having 2 teachers in a class was not sustainable financially but provide a ratio of 1:8 in their classes instead with most class teachers being qualified ToDs. A floating ToD provides additional teaching on a push-in or pull-out model as required and all classes have a dedicated

educational assistant. Wexford runs a similar model with a dedicated ToD, educational assistant and a floating ToD available for additional support as and when needed.

Employment issues

Throughout the world there is a shortage of qualified and experienced teachers of the deaf. New Zealand is no different in this regard. Finding qualified ToDs to employ was an issue raised by all programmes, however once employed there was very little movement, teachers tend to stay. Therefore with a scarce resource it is important to be able to maximise the impact this workforce can provide and co-enrolment appears to provide both economies of scale and consistency for learners.

The importance of direct instruction and communication should mean that mediated communication is not the 'norm' but there is still a place for communication support for both teachers and students who are not fluent sign language users. The employment of educational interpreters vs the employment of TAs who have signing skills was another challenge for schools. There is a major shortage of people who have fluent signing skills and who are available to work for the low pay offered to TAs. At Miles ELC initially they employed TAs with signing skills with low pay. As their TAs increased their qualifications then political pressure was put on the district to pay educational interpreters in class. Other schools continued to rely on TAs/BSSOs for the majority of communication, only bringing in interpreters for formal events such as assembly or open nights.

Becoming a magnet school for students with high support needs

Something that was mentioned by most if not all programmes was the fact that because of their ability to be particularly inclusive and responsive to the learners in their schools they had noticed an increase in the number of students enrolling with them that had multiple learning needs. One school acknowledged that they had become far too 'top-heavy' with these students and it had had an impact on the education they were able to provide to all children in the class. As such they developed a policy which limited the ratio of learners with

additional needs in each co-enrolled class. There was a strong sense that having students with additional needs, whether academic or social provided benefits to other children in that they learned empathy, patience and tolerance but only if the ratio was low.

Sparse evidence of the academic benefits of co-enrolment

Although the socio-emotional benefits of co-enrolment have been well documented (de Klerk, Hermans, Wauters, de Laat, de Kroon & Knoors, 2019; Marschark, Tang & Knoors, 2014) the academic benefits are not so clear cut. According to Antia, Knoors and Marschark (2019) “The little information we have on academic achievement seems to indicate that co-enrolled DHH students outperform DHH peers in other settings” (p. 19). Tucker Maxon provided me with data that showed that 91% of their students in 3rd -5 th grade who took the Smarter Balanced Test (State Common Core exam) met or exceeded the literacy benchmark, meaning they are reading at (or above) a 3rd grade level. Other schools said their DHH students were achieving at their individual age levels in the same way as hearing students in the co-enrolled classes but didn’t provide any actual data. Logic would tell us that if a child has access to the curriculum at all times facilitated by effective classroom communication, flexibility in multi-age classes and teachers who are motivated to provide inclusive learning experiences, then academic results should follow. Anecdotally this is the case with the programmes I visited. However, the lack of data is something of a challenge and more robust research is required before evidence of the academic benefits can be confirmed.

Recommendations

Investigating co-enrolment as one model on a continuum of provision of education for DHH learners is a long term project and this fellowship experience was only the first ‘step’. The knowledge I gained through this fellowship opportunity has led me to the point where I believe the co-enrolment model should be formally considered as being an innovative pathway to achieving the goals of inclusion for DHH students in New Zealand. The ideas

outlined in my report could be incorporated into classrooms and schools in a way that the much-needed reforms should result in educational oversight that includes attention to DHH learners' social capital as well as academic skills.

There is a need for further focussed research to provide evidenced-based data to highlight the foundations of success so that co-enrolment could be expanded for use across Aotearoa New Zealand for the benefit of both DHH and hearing learners.

A small pilot study being set up in New Zealand to trial the idea of co-enrolment would be a start and would show that the knowledge and skills gained from undertaking this fellowship were being used to the benefit of Deaf Education in New Zealand. Currently approximately 120 students are enrolled in the two Core schools and educated in "provisions". These provisions are based at mainstream schools and are currently staffed by Teachers of the Deaf and other staff such as Communication Education Support Workers (CESW) and NZSL Tutors. Whether these schools would be the place to start is up for discussion. Most of the schools I visited did have a previous connection through having self-contained classes for DHH students but one (Toowong) did not, although there was support from the Deaf community and parent community for an environment that could educate children using Auslan in a mainstream environment. There are both advantages and disadvantages to both options.

The criteria for a school where a prospective trial might be based should have the following:

- Be small enough to allow a minority culture and language to integrate in enough numbers to form a "critical mass".
- Have a mixed-age class set-up already in place
- Embrace a multi-lingual/multi-cultural philosophy

- A leadership team who are excited and motivated to become involved in new learning and staff who see the value of collaborative team teaching

Another consideration is that the chosen school must be in an area that has the ability to continue to attract a significant number of DHH learners over time. There does need to be on-going sustainability of numbers rather than a specific area that may have 'spike' or 'bulge' of DHH learners for just a short period of time. Likewise, the area has to be big enough to consistently provide enough ToDs to work in the co-teaching classes. In addition, having a strong Deaf community from which Deaf teachers, Adult Language models and other support staff can be drawn is also imperative.

Ultimately visiting this selection of co-enrolment examples has provided the platform from which to consider what this could look like in Aotearoa New Zealand. What are our visions for the future of Deaf Education and what fits with our current funding models and resources?

Conclusion

The purpose of this fellowship was to investigate the idea of co-enrolment and identify any recommendations for NZ Deaf Education. Inclusion is more than making sure everyone can participate; it is about all children having a sense of belonging. This relies on the attitudes of leaders, both in the school community and classroom. Schools that are inclusive, welcoming and understand their obligations are just as critical as having enough services and supports available to DHH learners. Viewing students who are DHH through a lens of diversity potentially shines a light on their need for connections with people like themselves.

School systems are predominantly designed for hearing individuals. When DHH learners are

considered full members of the classroom, communication by and with DHH students becomes an integral part of the classroom culture. This means that practices evolve to ensure that all students have communication, academic, and social access.

Visiting these examples of co-enrolment programmes has confirmed my perspective that this type of programme has the potential to give DHH learners the best of both educational worlds, namely mainstream and specialist provisions. In addition, co-enrolment has the potential to provide full access to academic learning and socio-emotional development for all students in the classroom (DHH and hearing), mostly through a model of “co-teaching”.

A few months into this investigation I spotted a photo of a colleague of mine in the van Asch Museum and to my great surprise in 1979 there was actually a co-enrolled class based at van Asch Deaf Education Centre in Christchurch. It was staffed by a Teacher of the Deaf and a General Ed teacher who co-taught a class of DHH and hearing students. I contacted my colleague who is now retired and he informed me that it was “A great idea, but sadly not continued or written about”. I also discovered this had again been trialled a few years later and again abandoned. Co-enrolment was not a model being used elsewhere and therefore we here in New Zealand were potentially ahead of our time. It’s now time to ‘have another go’ and see what eventuates in a different and new era in Deaf Education.

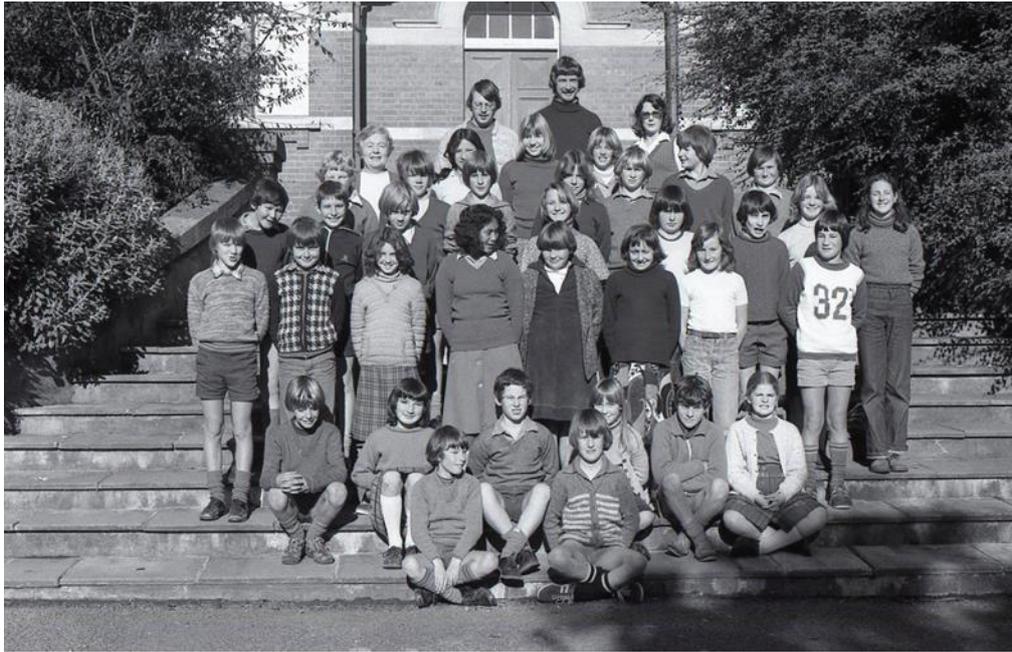


Figure 9 Co-enrolled class on the steps of van Asch Deaf Education Centre in 1979

Appendices

Travel Diary

Week 1 March 11-15th

Miles Exploratory Learning Centre - Tucson, Arizona, USA



Figure 10 Alone we can do so little, together we can do so much – Helen Keller



Figure 11 Don't tell me the sky's the limit when there are footprints on the moon – Paul Brandt



Figure 12 Mrs Patty Ross – Principal of Miles ELC



Figure 13 Staff of Kindergarten/ Year 1/ Year 2 class

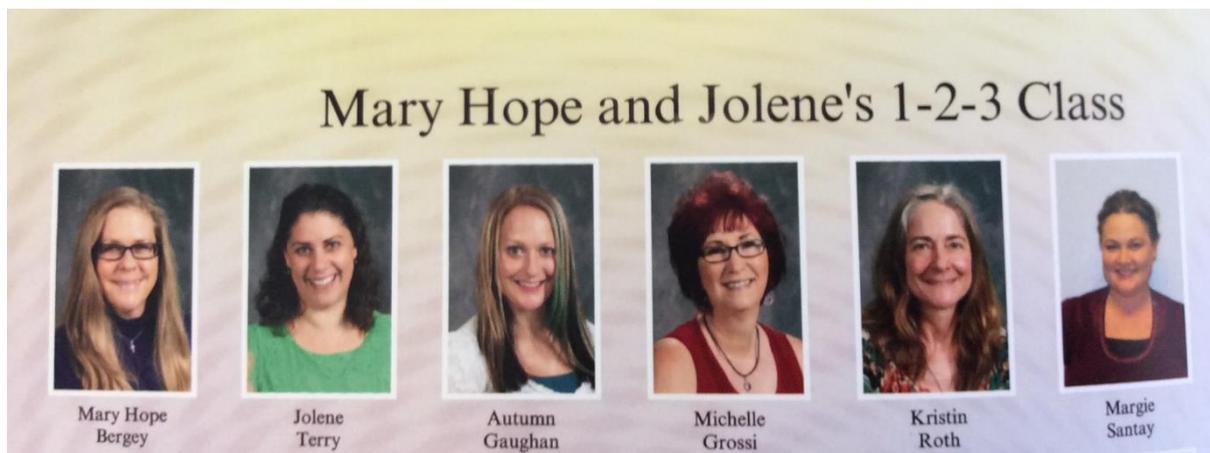


Figure 14 Staff of Year 1/year 2/ year 3 class



Figure 15 Staff of Year 3/Year4/Year5 class

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Figure 16 Example of a day plan showing the emphasis on higher thinking categories



Figure 17 (L to R) Shirin Antia University of Arizona, Cynthia Drye Tucson Unified School District, class teacher Kitty Hansen, Arizona Exceptional Ed Director Maura Clark Ingles, principal Patty Ross and student at Miles ELC

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Figure 18 Inquiry Learning Science Project sharing in Maureen and Jana's class, parents and other classes invited to come and ask questions

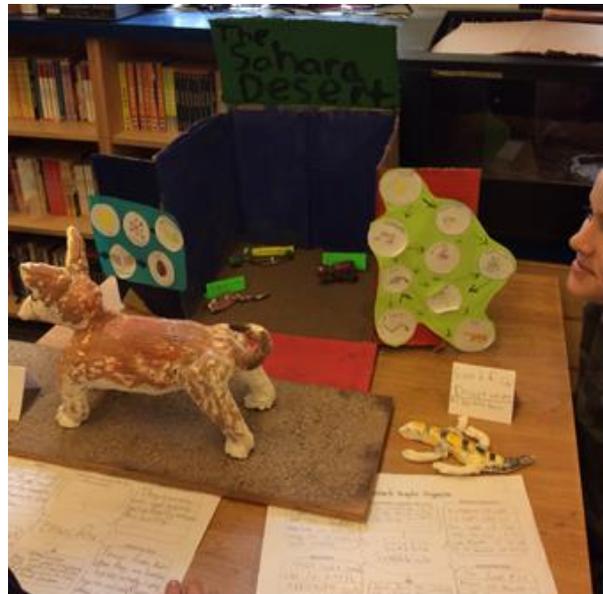


Figure 19 Examples of science inquiry projects Jungle and Sahara Desert



Figure 20 Having a cuppa with Professor Shirin Antia and Associate Professor Kathy Kreimeyer at the University of Arizona

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Week 2 March 18-22

Tucker Maxon, Portland, Oregon, USA



Figure 21 Front sign of Tucker Maxon and Mrs Linda Goodwin Principal



Figure 22 Staff at Tucker Maxon

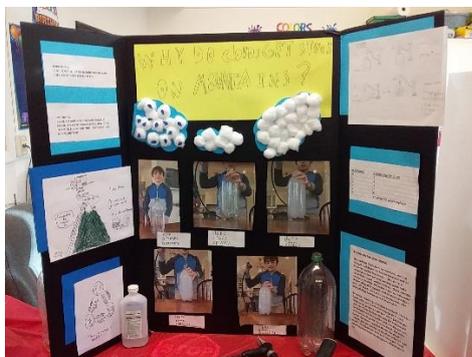
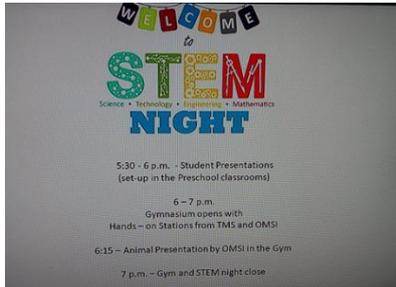


Figure 23 STEM night project displays

Week 3 March 25-27

Wexford Public School, Toronto, Ontario, Canada



Figure 24 Wexford school entrance

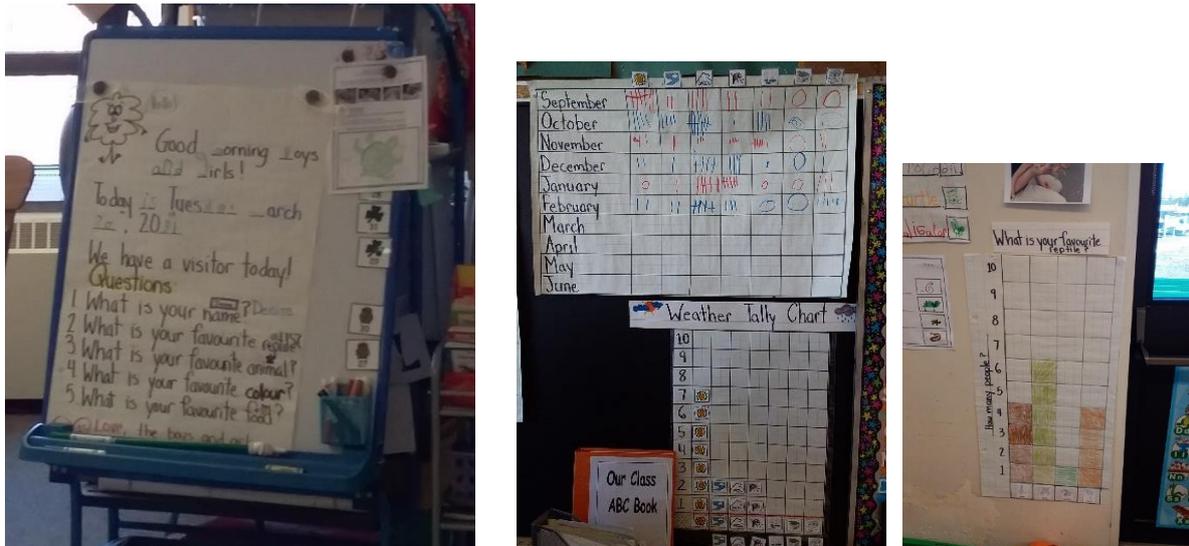


Figure 25 Using my visit for literacy in the morning, learning to ask good questions and examples of Maths work. This was 5 and 6 year olds.



Figure 26 Developing self-advocacy skills. This was a 5 year old changing her own batteries. All children are expected to know how to do this themselves

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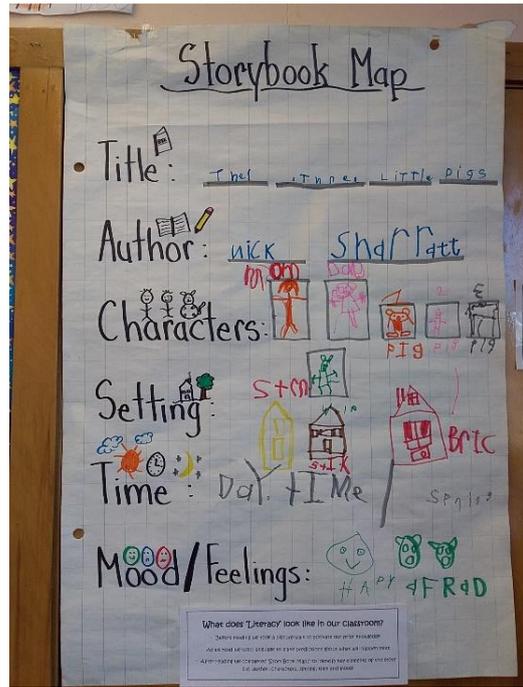


Figure 27 More examples of work being done in this kindergarten class. I was impressed with the language levels of these learners and the very high expectations the teacher had for them

Ms. Blyth-Collins Morning Schedule – DHH

Time	Day 1	Day 2	Day 3	Day 4	Day 5
8:30-9:00	Busing/entry listening checks				
9:00-9:20	Morning Circle Question of the Day, shared reading poems, calendar, weather, oral stories/poems	Morning Circle Question of the Day, shared reading poems, calendar, weather, oral stories/poems	Morning Circle Question of the Day, shared reading poems, calendar, weather, oral stories/poems	Morning Circle Question of the Day, shared reading poems, calendar, weather, oral stories/poems	Morning Circle Question of the Day, shared reading poems, calendar, weather, oral stories/poems
9:20-10:00	Group Learning SK – Shared Reading/ writing JK – Literacy/numeracy games	Group Learning SK – Shared Reading/ writing JK – Literacy/numeracy games	Group Learning SK – Shared Reading/ writing JK – Literacy/numeracy games	Prep (40 mins) Library w/ K1	Group Learning SK – Shared Reading/ writing JK – Literacy/numeracy games
10:00-10:15	S	N	A	C	K
10:25-11:05	Audition / Speech Invitations for Learning				
11:05- 11:35 (Jessica's Break 11:05-12:05)	Read Aloud Get ready for lunch				
11:35-12:35	L	U	N	C	H

Ms. Blyth-Collins Afternoon Schedule – DHH

Time	Day 1	Day 2	Day 3	Day 4	Day 5
12:35-12:40	Entry and FM setup	Entry and FM setup	Entry and FM setup	Entry and FM setup	Entry and FM setup
12:40-1:20	Prep (40 mins) K1 (JB) Kyle, Sid, Murtaza, Ben K3 Evan, Venus, Haroon,	Prep (40 mins) Music w/ K3	Prep (40 mins) Phys. Ed. w/ K2	Reverse Integration ELL Group – K1, K2 & K3 K1 – Ben, Murtaza, Sidney	Reverse Integration ELL Group – K1, K2 & K3 K1 – Ben, Murtaza, Sidney
1:20-2:00	Prep (40 mins) K1 Kyle, Sid, Murtaza, Ben K3 (JB) Evan, Venus, Haroon, Zara	Prep (40 mins) Phys. Ed. w/ K3	Reverse Integration *K3 Open Centres	Reverse Integration *K1 Open Centres	Reverse Integration *K2 Open Centres
2:00-2:20	S	N	A	A	A
2:20-2:40	Quiet Reading Guided Reading	Quiet Reading Guided Reading	Quiet Reading Quiet Reading	Quiet Reading Guided Reading	Quiet Reading Quiet Reading
2:40-2:55	Language/ Curriculum Support	Language/ Curriculum Support	Language/ Curriculum Support	Language/ Curriculum Support	Language/ Curriculum Support
2:55-3:30		B	U	S	

Figure 28 Weekly timetable, you can see the emphasis on language development

Week 4 May 13-17

Klemzig Primary School, Adelaide, South Australia



Figure 29 Entrance to Klemzig Primary and (L to R) with Leigh-Anne Edwards ToD and Kim Adams Assistant Principal of Klemzig Primary with responsibility for DHH services

Room 4 Term 2 Overview

English:
This term in room 4 we are having a strong focus on improving student's writing and self-editing skills.
Students will now be extended in their literacy learning to apply their phonetic knowledge to identify words with the same sound but different spellings.
We are starting a class novel and using this as a tool to explicitly teach reading comprehension strategies.

Spelling:
- Weekly spelling contract- student set personal goals for most students
- Groups working on phonics / high frequency words / subject vocabulary. Focussing on different ways to spell the same long vowel sounds.

Reading:
- Through individual and guided reading sessions, with a focus on literal questioning and text decoding
- Lexile quizzes, students are encouraged to exceed the number of quizzes they completed in Term 1
- Weekly comprehension task in ability based groups
- Class novel, related reading strategy task

Writing:
- Narrative writing using conjunctions, adverbs and adjectives
- Focus on paragraphs to separate the introduction, complication and resolution.
- Exploring different techniques to engage readers

Speaking & Listening:
- Assembly / class meetings
- Oral/signed topic talks and presentations with a focus on clear voice and expression

Library
- Borrowing time is Thursday mornings

Mathematics:
This term we will be focusing on formal and informal units of measurement and how we use mental computation strategies to solve problems. We will cover the following topics:
- Length, width & distances
- Weight
- Capacity
- Time
- Selecting the correct unit of measurement
- Converting measurements
- Comparing measurements and drawing conclusions

Science:
- Plants in action: How we use plants for food, fibres, building materials, medicines etc.
- Neuroscience: Getting to know your brain.

Arts:
Visual Art:
- Sketching nature and native animals
Music:
- Signing Choir
Drama:
- Improvisation
Media:
- Publishing information/presentations

Technology:
- Using measurements to design a play space

Physical Education:
- Fundamental movement skills

HASS:
- Location of states/territories, different vegetation types and native animals in Australia
- The use of zoos for conservation

Language- Auslan:
- Similarities and differences between Auslan and English
- Using directional signs and establishing people/objects in space
- Explore the impact of increased Auslan use within the wider community

Health & Child Protection:
- What are respectful relationships?
- Explore discrimination and power
- Personal safety, online, in the community & at home

Figure 30 Term overview for junior class

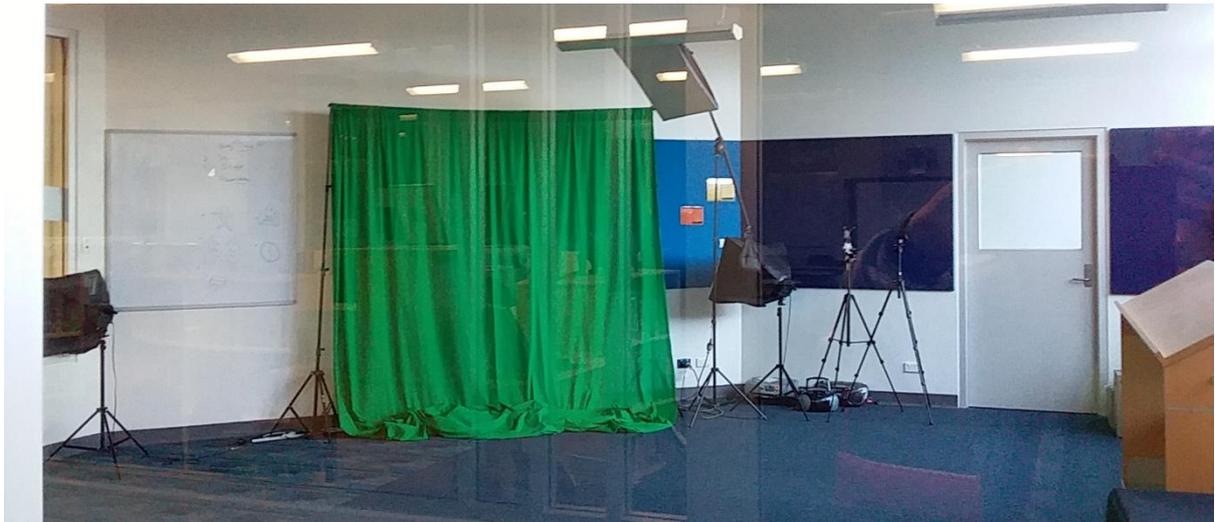


Figure 31 Greenroom used by students for filming Auslan news



Figure 32 Sensory room for students who need some time out. The school has a significant number of students with additional needs.



Figure 33 SmartBoard and sound field system in every class

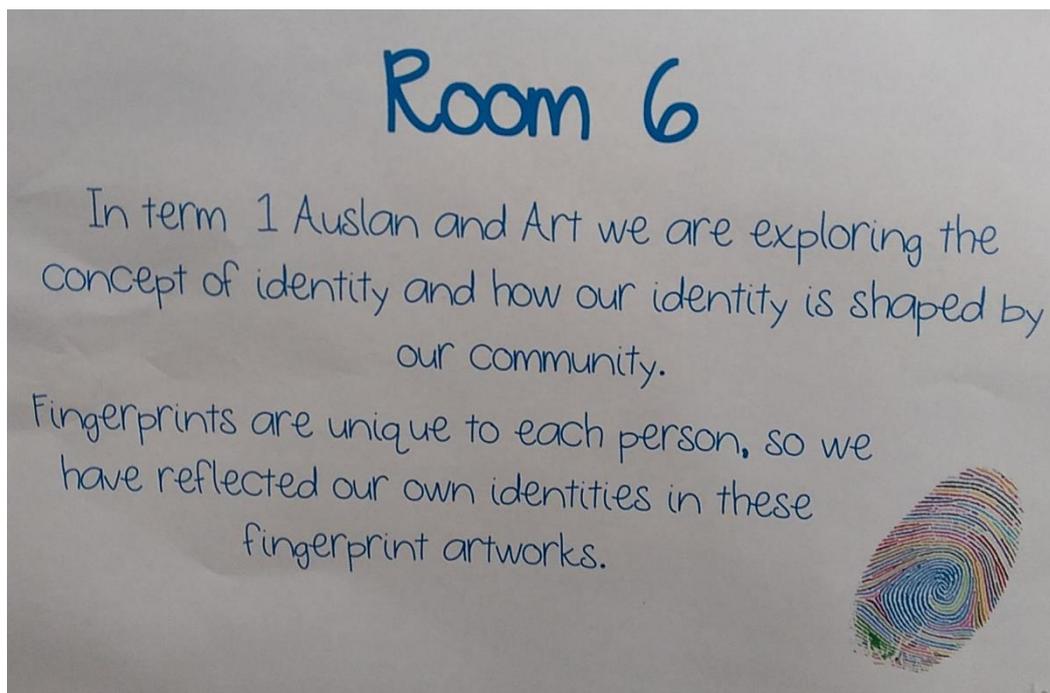


Figure 34 Exploring identity as part of the Auslan curriculum



Figure 35 Preschool space

Toowong State School Brisbane, Queensland, Australia



Figure 36 Front gate and with Caroline Gamin Head of Special Education Services at Toowong



Figure 37 Year 5/6 class being taught in full Auslan

This was the only school I saw where a lesson being taught using sign language for all students. The class consisted of 20 Hearing and 8 DHH students. The staff consisted of a Deaf Teacher of the Deaf, Class teacher, 2 Auslan language models and a TA: Communication.

This science lesson was being taught in full Auslan (without voicing) and occasional sim com when ToD realised some children having issues understanding. The Auslan language models were breaking down the language to provide better access for some students in Auslan and the TA was quietly interpreting sign to spoken English for a child who had recently arrived at the school and did not have enough skills to access the content in Auslan. I could not tell in this class who was deaf and who was hearing..... It was mind-blowing to see this in action.

Where have these learnings been shared?

Media

- <https://www.odt.co.nz/news/dunedin/researcher-looks-improve-deaf-education>
- <https://www.odt.co.nz/news/dunedin/trip-study-deaf-education>
- <https://www.odt.co.nz/news/dunedin/call-fix-learning-social-lag-deaf-children>
- <https://www.canterbury.ac.nz/news/2018/uc-churchill-fellow-to-investigate-deaf-education-internationally.html>
- <https://www.griffith.edu.au/development-alumni/remarkable-alumni/denise-powell>

Conferences

- Presented at Specialist Teaching block course University of Canterbury, Christchurch
July 2019
- ACEL Leading [E]Quality in Education: The 2019 National Disability Leadership Summit Sydney Keynote presentation “Inclusion is more than just being there”
- ICED 2020 Conference Brisbane Selected for oral presentation “Investigating Co-enrolment - The way of the future for deaf education?”

Stakeholders

- Promoted at NZSL Sector Advisory Group meeting (SAG) which includes Ministry of Education staff
- NZSL Board meeting 6.12.19
- Promotes through Deaf Education networks
- Presented at van Asch Deaf Education Centre as part of their NZSL Hui
- Presented and discussed with senior leaders DEC when discussing service design pilot work to be investigated in 2020

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