

Supporting Deaf Learners Using Visual Modes of Communication within Mainstream Schools to Access the Curriculum

DEVELOPED FOR



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1. Introduction

The recent Ministry of Education's (the Ministry) decision to aggregate ORS funding has provided an opportunity for innovative resource use¹ in supporting deaf learners in mainstream settings who use visual modes of communication and have been assessed as having an ongoing resource requirement. This is a population considered to be geographically spread thinly, resulting in linguistic isolation, with little access to natural visual language models. There is concern that they may not have adequate access to the curriculum because of their communication needs. The Ministry therefore initiated this project to identify those learners and more closely understand their current provision of services, whether different services might better meet their needs and how current services might be reconfigured.

To provide context for this report, there are 125 deaf learners enrolled at the Deaf Education Centres, with 103 at Kelston Deaf Education Centre (KDEC) and 22 at van Asch currently. There are also 750 deaf learners attending mainstream schools throughout New Zealand. Of these, there are 72 school-aged deaf learners who are not enrolled at the Deaf Education Centres but are enrolled at mainstream schools and who are primarily reliant on visual modes of communication, including NZ Sign Language (NZSL²) or Sign Supported English (SSE³). The term "deaf learners" is used in this report to refer to this small group of 72 and a smaller sample of 20 whose needs were analysed in greater depth.

This project aims to achieve two outcomes. Firstly, it aims to identify current and preferred resources by these mainstreamed deaf learners in order to see if existing resources can be better configured to meet their needs. Secondly, there is a commitment to develop clear guidelines for educational staff working with these mainstream deaf learners that is based on best practice, providing an adaptive and individualised focus and resulting in consistent access to the curriculum across the country.

2. Methodology

This project has been conducted in close collaboration with the Deaf Education Centres (DECs), from which a senior group of deaf education specialists has been formed to work with Ministry of

¹ Refer to section 45 I) of the Recommendations following the Review of Special Education and Success for All – Every School, Every Child, the Government's vision and work programme to achieve a fully inclusive education system.

² New Zealand Sign Language (NZSL) is a visual language with a complex linguistic structure. The signs that are used convey meaning through hand-shape, orientation, movement and location. Accompanying these signs are facial grammar, expression, use of space, a system of body posture and usually the absence of voice.

³ Sign supported English is an oral mode of communication with the addition of key signs. These signs provide an additional visual avenue of meaning. The signs are borrowed from New Zealand Sign Language and are used simultaneously with speech to provide the most meaning during communication.

Education project sponsors and the contracted analyst. This group designed the project process and reviewed the report before finalisation.

It was agreed to first identify all deaf learners in mainstream schools who use visual modes of communication and describe their core characteristics. To acquire more in-depth information on these learners' current and proposed resources in a manageable way, a representative sample of 20 children, 10 from both van Asch and KDEC, was selected using random numbers. The DEC's made available further information on these learners, which were checked to match against age, gender, ethnicity and language of the total population of deaf learners in the mainstream. Some changes were made however from the initial selection if learners had substantial disabilities other than deafness, as the focus of this report is on *typical* deaf learner requirements.

Data collection sheets were developed with DEC involvement to ensure that the information from both DEC's was as consistent as possible and flexible enough to enable additional needs to emerge. The DEC's considered existing and desired services for all of their enrolled students when identifying the needs of these deaf learners, and their current and proposed allocation of resources.

The focus of the project has been limited to the school sector only, that is, it has excluded children currently enrolled in early and post-secondary education. It has also excluded those learners who are not deaf but who may also rely on visual communication, as well as those learners who are deaf with other significant disabilities.

This short project has focused on what can be practically achieved to enhance current services for these learners within existing resources. A number of larger issues emerged that still require action in Deaf education, including the development of a national outcomes framework and alignment of early intervention services. These are noted but are not able to be resolved by this project directly.

An international search for operational best practice was conducted concurrently with the data collection. A range of North American, European and Australian deaf education leaders and centres were contacted through New Zealand experts, snowballing as further contacts and possibilities emerged. This aimed to locate operational policies from best available international practice that could be adapted to the New Zealand environment. The ultimate aim was to provide guidelines for educational support staff for deaf learners in the mainstream and thereby offer them consistent service in accessing the curriculum.

3. Legislative and Policy Requirements

A number of pieces of New Zealand legislation as well as education policy require the Ministry of Education to ensure an accessible education is provided for deaf learners.

Firstly the ***New Zealand Sign Language Act, 2006*** recognises New Zealand Sign Language as an official language of New Zealand, alongside English and Māori. The Act states principles to guide government departments in the promotion and use of New Zealand Sign Language. In particular, the Act states in section 9 (1)(c) that *government services and information should be made accessible to the deaf community through the use of appropriate means (including the use of New Zealand Sign Language)*.

The ***UN Convention on the Rights of Persons with Disabilities, 2007***, to which New Zealand is a signatory, requires States to ensure that deaf people have access to government information and services, to allow the use of New Zealand Sign Language, and to ensure the provision of sign language interpreters. Article 21 specifies that disabled people can exercise the right to freedom of expression and opinion. This includes the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice.

Article 24 is dedicated to ensuring education services are accessible and is detailed in Appendix 5. This recognises the right of disabled children to education so as to develop their skills and abilities and facilitate participation in society. Reasonable accommodation of impairment is expected, particularly through the employment of teachers, including those with impairments, who are qualified in sign language. Sections 3 (b) and (c) specify requirements in education for facilitating the learning of sign language and the promotion of the linguistic identity of the Deaf community, and 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.

The ***Human Rights Act, 1993*** protects people in New Zealand from discrimination in a number of areas of life. Discrimination occurs when a person is treated unfairly or less favourably than another person in the same or similar circumstances. The Act lists the areas and grounds where discrimination is unlawful and also some exemptions or exclusions, where it is not *reasonable* to expect the service to provide those services or facilities.

The Ministry of Education's ***National Education Guidelines*** provides a number of relevant references, and are outlined in more detail in Appendix 5:

- The ***National Administration Guidelines (NAGs)*** have a number of relevant guidelines to foster learner achievement in curriculum, especially literacy and numeracy, in a safe emotional environment.
- The ***National Education Goals (NEGs)*** notes that education is at the core of our nation's effort to achieve economic and social progress. In recognition of the fundamental importance of education, the Government sets goals for the education system of New Zealand. These goals include aims to enable all learners to realise their full potential as individuals; remove barriers to achievement; develop the knowledge, understanding and skills needed by New Zealanders; develop high levels of competence in literacy and numeracy, science and technology and physical activity; support parents in their vital role as their children's first teachers; monitor learner performance against their objectives and programmes to meet individual need; ensure the needs of those with special needs are identified and receive appropriate support; ensure the participation and success of Māori; and acknowledge the cultural diversity within New Zealand.
- The Official languages section of the ***NZ Curriculum*** notes the use of three languages in schools. Te reo Māori and New Zealand Sign Language (NZSL) are official languages of New Zealand. English, the medium for teaching and learning in most schools, is a de facto official language by virtue of its widespread use. For these reasons, these three languages have special mention in *The New Zealand Curriculum*. All three may be studied as first or additional languages. They may

also be the medium of instruction across all learning areas. Guidelines specific to the learning of te reo Māori and NZSL provide detailed information for schools that choose to offer them.

4. Population Descriptions

The population of 72 deaf learners, who use visual modes of communication in mainstream schools, is outlined in Appendix 1. The tables show that there are some substantial differences in ages, ethnicity, communication mode, literacy levels and ORS needs levels between the two Deaf Education Centre regions.

Deaf learners in mainstream schools within the KDEC region

- i. Two-thirds (67%) of KDEC's 27 deaf learners are both aged 10 or under and male.
- ii. Over a half (56%) are Māori, a third (30%) are NZ European and 7% are Pacific or Asian.
- iii. Over a third (40%) are NZSL users, with over a third (37%) using spoken English and a quarter using Bridging⁴ signs or Vis-Comm. Only 4% use Sign Supported English (SSE).
- iv. Nearly three quarters (74%) of families speak English as their primary language at home. NZSL (18%) and other spoken languages constitute the remainder.
- v. Just over a fifth (22%) use NZSL at a complex sentence level, with nearly half (44%) signing at pre-sentence level.
- vi. Over two-thirds (69%) read at a 5 – 6.5 year level, a fifth (20%) at 6.5 – 8 year level and 12% at an 8 – 12 year old level.
- vii. Over two thirds (70%) write at a presentence level and a quarter (26%) write mainly simple and compound sentences. Only 4% write compound complex sentences.
- viii. A half of the group (52%) have a profound hearing loss.
- ix. A half (52%) have a cochlear implant or bone anchored hearing aid.
- x. Over half (58%) wear a hearing aid.
- xi. Over a third (35%) are assessed by the Ongoing Resourcing Scheme (ORS) as having very high needs and nearly a half (46%) as high. Nearly a fifth (19%) are not verified.
- xii. Two NZSL users also have another disability.
- xiii. A half live in cities and nearly a third (30%) in towns, with 22% in rural areas.

Deaf learners in mainstream schools within the Van Asch region

- i. Van Asch's 45 deaf learners have a more even spread of ages and gender with a third being over the age of 14 and less than a half (44%) aged 10 or under and in Years 1 – 5 (49%).
- ii. Just over a half (51%) are male.
- iii. Most (62%) are NZ European with just over a fifth (22%) Māori.
- iv. Two thirds (67%) use Sign Supported English as their primary mode of communication and learners use Vis Comm and spoken English to varying degrees. A third (33%) use NZSL. SSE is

⁴ Deaf learner uses signs, created by educationalists, for English words that don't exist in NZSL, to provide access to English grammar. Bridging sign is used for teaching English literacy skills.

generally used in the classroom to teach learners English and NZSL tends to be used as a part of storytelling and in cultural studies as well as outside of the classroom.

- v. Three quarters (82%) of families speak English as their primary language at home. 7% are NZSL users.
- vi. Nearly half (47%) use language at a presentence level and an eighth (13%) can construct complex sentences.
- vii. Over three quarters (82%) read at a 5 – 6.5 level and, a tenth (9%) both at 6.5 – 8 year level and at 8 – 12 year level.
- viii. A significant majority (87%) write at a presentence level, a tenth write mainly simple and compound sentences and 4% write compound complex sentences.
- ix. Hearing loss is similarly spread to the KDEC learners, with over a half having a profound hearing loss.
- x. Over a third (36%) have a cochlear implant and over a half (56%) wear a hearing aid.
- xi. Over half (58%) are assessed by ORS as having very high needs and nearly a third (31%) as having high needs. One tenth (11%) are not verified.
- xii. Two NZSL users also have another disability.
- xiii. Nearly two thirds (64%) live in cities, nearly a third (27%) in towns and 9% are in rural areas.

When looking at the national population of 72 deaf learners within mainstream schools, particularly in relation to their achievement in the area of written English (Appendix 2), a number of trends emerge:

- 1) These deaf learners are not achieving levels of written English commensurate with their ages. For example, 12% of learners aged over 14 are at a pre writing level and only 18% are working at Level 3 or better, writing complex compound sentences.
- 2) Māori and Pacific learners within this population are not achieving written levels of English as well as Europeans, even when considering they have a younger age range.
- 3) Learners within the two DEC regions have ostensibly different primary communication modes, although there is different terminology used which may obscure similarities. KDEC mainstream learners primarily use NZSL (33%), Bridging (15%), Vis Comm (15%) and spoken English (37%). Van Asch's mainstreamed deaf learners primarily use SSE (67%) and NZSL (33%). However, SSE includes the use of spoken English and Vis Comm. Some reconciliation of terminology between the DECs will increase the usefulness of future comparisons.
- 4) Most of these deaf learners (86%) are attending schools in cities or towns⁵.
- 5) Most learners (70%) in rural areas are aged 10 or under and four-fifths (81%) are writing at level 1. Learners in cities or towns have a wider age range and are achieving higher levels of written English.
- 6) Most communication mediums (NZSL, SSE, Bridging and Spoken English) are similarly distributed across all age ranges.

⁵ Deaf learners in schools in NZ cities over 34,000 (http://en.wikipedia.org/wiki/List_of_cities_in_New_Zealand) were identified as living in cities. Schools in smaller urban areas were counted as towns, and schools outside of towns were listed as rural.

- 7) Hearing status and the wearing of a cochlear implant does not seem to have a consistent effect on the level of written English ability for these students, despite consideration of age differences.
- 8) All cochlear implant wearers have a severe or profound hearing loss and cochlear implants are more likely to be used by European learners (46%) than Māori (36%) or Pacific (25%) learners.
- 9) Ten (14%) of all these deaf learners are not verified by ORS. Two are NZSL users, four are SSE users and four use spoken English. Three have a severe or profound hearing loss. Five have a moderate-severe or moderate-profound hearing loss. A half of these are NZ European and a half are Māori.
- 10) Nearly a third (31%) of learners assessed as high needs under ORS are achieving level 2 or above written skills, in comparison to 15% of those with very high needs. However, learners with very high needs have a substantially younger population (60% under 10 as compared to 38%). 98% of those assessed with very high needs have severe or profound hearing losses.
- 11) All four deaf learners with additional learning needs are achieving very low levels of literacy.

5. Sample Summary

Tables describing the sample of twenty learners from both van Asch and KDEC are provided in Appendix 3. The final samples were generally representative of the total population of these 72 deaf learners, although there were some exceptions that are described below:

- The sample had a younger population than the total van Asch population of mainstream deaf learners, with 60% being aged 10 or under as compared to 49% of the total population. Similarly, only 10% of the sample was aged over 14 as compared to 22% of the total.
- Learners in the van Asch sample had higher achievement levels in reading than the total population (30% had a reading age higher than 6.5 years as compared to 18% of the total van Asch population). Conversely, the KDEC sample had lower reading achievement levels (20% had a reading age higher than 6.5 years as compared to 31% of the KDEC population). None of the sample achieved at level 3 or above in written skills whereas 4% of the total population did.
- Learners in the van Asch sample had more profound hearing losses (70%) as compared to the van Asch population (53%). Learners in the KDEC sample had more moderate hearing losses (40%) as compared to the population (29%).
- Van Asch learners in the sample were more likely to attend city based schools (80%) than the total population (64%) and less likely to be rural (0%) than the larger population (9%).

While this sample closely resembles the total population of 72 mainstreamed deaf learners from which they were derived, there are some differences. The sample therefore cannot be assumed to provide precise indications of need for the entire group of deaf mainstream learners.

6. Reconfiguring Support

Tables describing the current use of resources, as compared to the resources the DEC's believe to be needed, are listed for the total sample population of these deaf learners as well as the individual DEC's in Appendix 4.

The key trends are an overall maintenance of Resource Teachers of the Deaf (RTD) and reconfiguration away from the use of teacher aides, substituting these with more:

- Communicators⁶
- Deaf Resource Staff
- NZSL tutors to provide NZSL classes for students and families and
- Access for both students and families to the Deaf community
- Access to residential programmes.

The number of educational interpreters⁷ required is still low, due partly to their high cost, lack of availability and a perceived lack of flexibility in working with learners. Traditionally, interpreters purely convey information between languages but are not responsible for ensuring learner understanding. KDEC have developed a more flexible job description specifically for the educational environment targeted at learner needs. However, employment costs for interpreters are still considered unaffordable, with hourly rates around \$100 an hour if contracted from an agency. Current collective pay scales may not be high enough to attract sufficient numbers of these skilled staff.

The reconfiguration of resources sought by the DEC's is broadly consistent with both international best practice⁸ and current supports and services available to learners enrolled with the DEC's. These changes aim to mitigate inequity of access for deaf learners using visual modes of communication in mainstream environments. The different approaches of the two DEC's are of note, with KDEC taking a focus on the use of NZSL and van Asch taking a Sign Supported English approach. Van Asch however seeks the most significant increase in the use of communicators for these learners instead of teacher aides.

Other Possible Developments

Technology that enhances curriculum access is continuing to develop. For example, iPads have been sought for two children to enhance literacy. Costs may be available through existing equipment provisions.

⁶ Communicators refer to personnel with skills in NZ Sign Language who do not have to reach any specified NZSL proficiency and are not formally trained or qualified.

⁷ Interpreters are formally trained and qualified to interpret between languages. Educational interpreters are expected to specifically operate in educational environments.

⁸ Fitzgerald & Associates: Scoping Support for New Zealand Sign Language Users Accessing the Curriculum. Part I: An International Literature Review; Ministry of Education Special Education; October 2010

Video conferencing facilities are also sought by both DECs (e.g. Facetime, Skype) to support staff supervision or hold children's classes at distance. This resource however will not be available for between 1 to 4 years. The Ministry of Economic Development has advised that the roll out of ultra-fast broadband to all 748 rural schools is expected to begin in the second half of this year and be completed by 2016, according to the Ministry of Education website. Once in place, existing resources would be used to manage classes and supervision.

Many DVD language and teaching resources have been developed but more are required by both DECs. Van Asch would like to see more resources for Signed Supported English in particular. KDEC would like to see more NZSL and captioned resources developed for older students. Staffing to use these resources already exists so the costs are largely one-off. Van Asch notes that some senior Specialist Resource Team staffing is needed to supervise, train and support staff in their use and their ongoing direct work with deaf learners.

The Victorian Deaf Education Institute (VDEI) in Australia, providing staff training and technology/educational development were mentioned as an example of progressive educational development. Recent VDEI developments include piloting real-time captioning in classrooms, assessment of classroom acoustic environments, analysis of curriculum coordination, and a range of approaches to support remote learning. Both DECs are seen as centres of excellence that either do or could lead similar developments.

NCEA standards in NZSL are continuing to be developed currently, and nationally moderated assessment structures need to be provided to ensure consistency of teaching and language proficiency across the country.

Further professional development in educational approaches, language use and instruction will be required.

More residential programmes are proposed by both DECs for mainstreamed Deaf learners to acquire skills, including Deaf language and culture, and to get access to counselling and other specific skills programmes. KDEC would like to see an extra two trained counsellors to meet the mental health needs of mainstreamed students for these programmes.

Greater access to the Deaf community is required by both DECs. These currently incur little or no cost. Where there are Deaf communities, Deaf learners are generally welcomed as a part of those social groups. Further exploration is needed to ensure this is sustainable in the longer term.

Individual Variation

Resources vary depending on the needs and context of individual learners. The individual needs of each child vary significantly and cannot be easily categorised. For example, Sam⁹, who has a profound hearing loss and uses both a cochlear implant and hearing aid, prefers to think of himself as a hearing boy and uses English as his preferred communication. Both of his profoundly deaf parents,

⁹ Fictitious names are used to protect privacy.

active in the Deaf community, are supportive of his viewpoint. On the other hand, Manu has a moderate-severe hearing loss, primarily uses spoken English and has been attending a mainstream school where he was the only deaf learner in classes. He has moved to a deaf unit so he can also access NZSL, which he values for the enrichment it brings in social and cultural identity.

For this reason, choices around resources to achieve individual learning goals are variable and cannot be easily predicted. Improved solutions will be individually based and targeted to ensure best use of existing resources.

Resource Management

The DEC Board(s) will have responsibility to flexibly manage their ORS and other Ministry resources for this population at the same current level, as per NAG 4, which states:

According to legislation on financial and property matters, each board of trustees is also required in particular to: (a) allocate funds to reflect the school's priorities as stated in the charter; and (b) monitor and control school expenditure, and ensure that annual accounts are prepared and audited as required by the Public Finance Act 1989 and the Education Act 1989;

7. Policy

Despite best efforts, international examples of operational policies for deaf learners in mainstream settings have not been located. This may be for a number of reasons.

Signing Deaf children are often not educated in mainstream settings in some parts of the world, as noted specifically by Denmark and Australia. The lack of reply from other countries, including Canada and the US, suggests that either people are unwilling to share their policies or perhaps more likely, have not yet developed them.

Certainly a recent article¹⁰ on Deaf education calls for differentiated language planning and language policy for children who have earlier or later cochlear implants and those for whom access to spoken language is difficult. They note this is still challenging because a variety of stances is required, depending on the child's context (e.g. family support) and needs. Standard protocols in operational policy may be extremely difficult to achieve as a result of this variation.

Further work is needed then to develop flexible operational policy that will guide educational staff and schools in the mainstream to enable national consistency and deliver enhanced learner outcomes.

These may target mainstream schools or individual staff within mainstream schools. For example, broad outcomes could be developed that link to the Government's priorities, such as social and employment outcomes. Examples might include:

¹⁰ Knoors, H and Marschark, M: Language Planning for the 21st Century: Revisiting Bilingual Language Policy for Deaf Children, Journal of Deaf Studies and Deaf Education; March 2012

- Natural language preferences of learners are identified
- Support staff are skilled in language preferences
- NZSL classes are available within local area for learners and families
- Strong emphasis is given to developing spoken and written English
- Links exist with the local Deaf community
- Access to Deaf mentors is available
- Access is available to residential programmes with other deaf children.

8. Future Developments

Immediate

This report has focussed primarily in the identification of current resources used by this cohort of deaf learners in mainstream schools. A number of issues have emerged that require resolution to facilitate the flexible use of their available funding:

- Do non-verified deaf learners require lower levels of resources, i.e. is the current ORS verification system equitable? What is their best learning environment to meet needs?
- How should resources from the Ministry's Specialist Services (e.g. Advisors on Deaf Children, speech language therapists, kaitakawaenga, physiotherapists, psychologists) be used in the future?

Medium Term

Other issues have also emerged which require further attention in order to ensure deaf learners in general have good access to the curriculum:

- 1) What policy direction can be given to schools and staff working with deaf learners in mainstream schools that maximises consistency of national best practice?
- 2) What needs to be included in a national outcomes framework?
- 3) What is required to ensure national consistency in language development approaches?
- 4) What workforce development is required?
- 5) How can early intervention services form an effective foundation for school-aged educational approaches?
- 6) How should services for deaf learners with additional learning needs be configured in contrast to the typical deaf learners identified in this report?
- 7) What are our complete resource requirements? What sources are available and appropriate for meeting these? Funding sources may include existing Ministry of Education opportunities as well as other government departments, publicly available grants or user pays systems.

Appendix 1: Regional Deaf Learners Using Visual Modes of Communication in NZ Mainstream Schools

Table 1: Age Group	KDEC	Van Asch	Total
5-10	67%	44%	53%
11-14	22%	24%	24%
15+	11%	31%	24%
Total	100%	100%	100%
Total	27	45	72

Table 2: Gender	KDEC	Van Asch	Total
Female	37%	49%	44%
Male	63%	51%	56%
Total	100%	100%	100%

Table 3: Ethnicity	KDEC	Van Asch	Total
NZ European	30%	62%	50%
Māori	56%	22%	35%
Pacific	4%	7%	6%
Asian	4%	7%	6%
Other	7%	2%	4%
Total	100%	100%	100%

Table 4: School year	KDEC	Van Asch	Total
1	15%	7%	15%
2	19%	11%	19%
3	4%	16%	4%
4	19%	9%	19%
5	19%	7%	19%
Total 1 - 5	70%	49%	57%
6	11%	7%	8%
7	0%	2%	1%
8	0%	4%	3%
9	4%	7%	6%
10	0%	9%	6%
Total 6 - 10	15%	29%	24%
11	11%	9%	10%
12	0%	7%	4%
13	0%	4%	3%
15	0%	2%	1%
Total 11 - 15	11%	9%	10%
Total	100.0%	100.0%	100.0%

Table 5: Principal Communication mode	KDEC	Van Asch	Total
Bridging	11%	0%	4%
NZSL	33%	33%	33%
Spoken English	30%	0%	11%
spoken English/NZSL	7%	0%	3%
SSE	4%	67% ¹¹	43%
Vis -comm	11%	0%	4%
Vis-comm/oral	4%	0%	1%
Total	100%	100%	100%

Table 6: Principal Communication mode¹²	KDEC	Van Asch	Total
NZSL	33%	33%	33%
SSE/Bridging	15%	67%	47%
Vis Comm	15%	0%	6%
Spoken English	37%	0%	14%
Total	100%	100%	100%

Table 7: NZSL and Language Level¹³	KDEC	Van Asch	Total
Presentence level	44.4%	46.7%	44.4%
Simple sentence level	33.3%	40.0%	37.5%
Complex sentence level	22.2%	13.3%	16.7%
Total	100.0%	100.0%	100.0%

Table 8: Primary Language of Family	KDEC	Van Asch	Total
Cambodian	0%	2%	1%
English	74%	82%	79%
English/Samoan	0%	5%	3%
Karen (Thai)	0%	2%	1%
NZSL	7%	7%	7%
NZSL English	11%	0%	4%
Samoan SL/NZSL	4%	0%	1%
Somali/English	0%	2%	1%
Tokelauan	4%	0%	1%
Total	100%	100%	100%

¹¹ Includes spoken English and Vis-comm

¹² Collapsed categories

¹³ KDEC figures reflect level of NZSL and van Asch figures represent general language levels.

Table 9: Literacy level – reading (Appendix 7)	KDEC	Van Asch	Total
pre-reading	0%	18%	11%
1	27%	13%	18%
2	4%	0%	1%
3	0%	7%	4%
4	0%	9%	6%
5	4%	4%	4%
6	8%	2%	4%
7	8%	2%	4%
8	12%	7%	8%
9	4%	7%	6%
10	4%	4%	4%
11	0%	2%	1%
12	0%	2%	1%
14	0%	4%	3%
Total 1 – 14 (RA 5 – 6.5)	67%	82%	77%
15	0%	2%	1%
16	8%	4%	6%
18	12%	0%	4%
19	0%	2%	1%
Total 15 – 20 (RA 6.5 – 8)	22%	9%	13%
21	0%	2%	1%
23	4%	2%	3%
27	4%	2%	3%
30	4%	2%	3%
Total 21 – 30 (RA 8 – 12)	11%	9%	10%
Total	100%	100%	100%

Table 10: Literacy level – written (Appendix 8)	KDEC	Van Asch	Total
pre-writing	0%	16%	10%
1a	26%	11%	17%
1b	11%	16%	14%
1c	15%	24%	21%
1d	15%	11%	13%
1e	4%	9%	7%
Total Level 1	70%	87%	81%
2a	15%	7%	10%
2b	11%	2%	6%
Total Level 2	26%	9%	15%
3	0%	4%	3%
6	4%	0%	1%
Total Level 3+	4%	4%	4%
Total	100%	100%	100%

Table 11: Hearing Status	KDEC	Van Asch	Total
Mild	0%	2%	1%
Moderate	11%	2%	6%
Moderate/Severe	11%	24%	20%
Moderate-profound	7%	0%	3%
Severe	7%	16%	11%
Severe/Profound	11%	2%	6%
Profound	52%	53%	54%
Total	100%	100%	100%

Table 12: Cochlear Implant	KDEC	Van Asch	Total
Baha ¹⁴	4%	0%	1%
No	48%	64%	58%
Yes	48%	36%	40%
Total	100%	100%	100%

Table 13: Number of current cochlear implants	KDEC	Van Asch	Total
1	13	15	28
2		1	1
Total	13	16	29

Table 14: Current hearing aid wearer	KDEC	Van Asch	Total
Baha	4%	0%	1%
No	38%	44%	42%
Yes	58%	56%	57%
Total	100%	100%	100%

Table 15: ORS for hearing loss	KDEC	Van Asch	Total
Not Verified	19%	11%	14%
High	46%	31%	37%
Very High	35%	58%	49%
Total	100%	100%	100%

Table 16: Other disabilities	KDEC	Van Asch	Total
Yes	2	2	4
Total	2	2	4

¹⁴ Bone anchored hearing aide: is surgically implanted for sound transmission to the inner ear.

Table 17: ORS for other disabilities	KDEC	Van Asch	Total
Severe cognitive delay	1		1
Very High		2	2
Legally blind	1		1
Total	2	2	4

Table 18: Residence¹⁵	KDEC	Van Asch	Total
Rural	22%	9%	14%
Town	30%	27%	28%
City	48%	64%	58%
Grand Total	100%	100%	100%

¹⁵ Deaf learners in schools in NZ cities over 34,000 (http://en.wikipedia.org/wiki/List_of_cities_in_New_Zealand) were identified as living in cities. Schools in smaller urban areas were counted as towns, and schools outside of towns were listed as rural.

Appendix 2: National Population of Deaf Mainstream Learners Using Visual Modes of Communication

Table 19: Literacy level - written	NZ European	Māori	Pacific	Asian	Other	Total
Pre writing	6%	3%	0%	1%	0%	10%
1a	6%	10%	0%	0%	1%	17%
1b	4%	7%	1%	1%	0%	14%
1c	11%	7%	1%	1%	0%	21%
1d	4%	7%	1%	0%	0%	13%
1e	7%	0%	0%	0%	0%	10%
Total Level 1	75%	96%	75%	75%	33%	81%
2a	6%	1%	1%	0%	1%	6%
2b	3%	0%	0%	1%	1%	3%
Total Level 2	17%	4%	25%	25%	67%	15%
3	3%	0%	0%	0%	0%	3%
6	1%	0%	0%	0%	0%	1%
Total Level 3+	8%	0%	0%	0%	0%	4%
Total	100%	100%	100%	100%	100%	100%
Total	36	25	4	4	3	72

Table 20: Age Group by Ethnicity	NZE	Māori	Pacific	Asian	Other	Total
5-10	42%	80%	0%	50%	33%	53%
11-14	25%	16%	75%	0%	33%	24%
15+	33%	4%	25%	50%	33%	24%
Grand Total	100%	100%	100%	100%	100%	100%

Table 21: Literacy by Age Group

Literacy level - written	5-10	11-14	15+	Total
Pre writing	8%	12%	12%	10%
1a	29%	6%	0%	17%
1b	21%	12%	0%	14%
1c	21%	29%	12%	21%
1d	13%	12%	12%	13%
1e	3%	6%	18%	7%
2a	3%	18%	18%	10%
2b	3%	6%	12%	6%
3	0%	0%	12%	3%
6	0%	0%	6%	1%
Total	100%	100%	100%	100%
Total	38	17	17	72

Table 22: Literacy by Residence

Literacy level - written	City	Town	Rural	Total
Pre writing	12%	5%	10%	10%
1a	17%	15%	20%	17%
1b	10%	25%	10%	14%
1c	17%	20%	40%	21%
1d	14%	5%	20%	13%
1e	7%	10%	0%	7%
Total Level 1	76%	80%	100%	81%
2a	12%	10%	0%	10%
2b	5%	10%	0%	6%
Total Level 2	17%	20%	0%	15%

Literacy level – written contd	City	Town	Rural	Total
3	7%	0%	0%	4%
6	2%	0%	0%	1%
Total Level 3+	17%	20%	0%	15%
Total	100%	100%	100%	100%
Total	42	20	10	72

Table 23: Age Group by Residence

Age Group	City	Town	Rural	Total
5-10	48%	55%	70%	53%
11-14	24%	20%	30%	24%
15+	29%	25%	0%	24%
Total	100%	100%	100%	100%
Total	42	20	10	72

Table 24: Literacy by Principal Mode of Communication

Literacy - written	NZSL	SSE/Bridging	Vis-comm	Spoken English	Total
Pre writing	8%	15%	0%	0%	10%
1a	13%	21%	0%	20%	17%
1b	25%	12%	0%	0%	14%
1c	13%	29%	25%	10%	21%
1d	17%	9%	25%	10%	13%
1e	4%	9%	0%	10%	7%
Total Level 1	79%	94%	50%	50%	81%
2a	8%	3%	25%	30%	10%
2b	4%	3%	25%	10%	6%
Total Level 2	13%	6%	50%	40%	15%
3	8%	0%	0%	0%	3%
6	0%	0%	0%	10%	1%
Total Level 3+	8%	0%	0%	10%	4%
Total	100%	100%	100%	100%	100%
Total	24	34	4	10	72

Table 25: Age Group by Principal Communication Mode

Age Group	NZSL	SSE/Bridging	Vis-comm	Spoken English	Total
5-10	50%	56%	50%	50%	53%
11-14	21%	21%	50%	30%	24%
15+	29%	24%	0%	20%	24%
Total	100%	100%	100%	100%	100%
Total	24	34	4	10	72

Table 26: Literacy by NZSL and Language Level

Literacy level - written	Presentence	Simple sentence	Complex sentence	Total
Pre writing	18%	4%	0%	10%
1a	33%	4%	0%	17%
1b	18%	15%	0%	14%
1c	21%	26%	8%	21%
1d	3%	26%	8%	13%
1e	0%	15%	8%	7%
Total Level 1	94%	89%	25%	81%
2a	3%	11%	25%	10%
2b	3%	0%	25%	6%
Total Level 2	6%	11%	50%	15%
3	0%	0%	17%	3%
6	0%	0%	8%	1%
Total Level 3	0%	0%	25%	4%
Total	100%	100%	100%	100%
Total	33	27	12	72

Table 27: Age Group by NZSL and Language Level

Age Group	Presentence	Simple sentence	Complex sentence	Total
5-10	76%	44%	8%	53%
11-14	12%	26%	50%	24%
15+	12%	30%	42%	24%
Total	100%	100%	100%	100%
Total	33	27	12	72

Table 28: Language Level by Age Group

NZSL & Language Level	5-10	11-14	15+	Grand Total
Presentence	66%	24%	24%	46%
Simple sentence	32%	41%	47%	38%
Complex sentence	3%	35%	29%	17%
Total	100%	100%	100%	100%
Total	38	17	17	72

Table 29: Age Group by Hearing Status

Age Group	Mild	Moderate	Moderate/Severe	Moderate-profound	Severe	Severe/Profound	profound
5-10	100%	100%	43%	50%	11%	75%	58%
11-14	0%	0%	36%	50%	33%	0%	21%
15+	0%	0%	21%	0%	56%	25%	21%
Total	100%	100%	100%	100%	100%	100%	100%
Total	1	4	14	2	9	4	38

Table 30: Literacy level by Hearing Status

Literacy level - written	Mild	Moderate	Moderate/Severe	Moderate-profound	Severe	Severe/Profound	profound
Pre writing	0%	0%	21%	0%	22%	0%	5%
1a	0%	50%	14%	50%	0%	0%	18%
1b	100%	0%	7%	0%	11%	50%	13%
1c	0%	0%	50%	0%	11%	0%	18%
1d	0%	0%	0%	50%	11%	0%	18%
1e	0%	25%	0%	0%	11%	0%	8%
Total Level 1	100%	75%	93%	100%	67%	50%	82%
2a	0%	25%	7%	0%	11%	0%	11%
2b	0%	0%	0%	0%	11%	50%	3%

Literacy level – written cont'd	Mild	Moderate	Moderate/Severe	Moderate-profound	Severe	Severe/Profound	profound
Total Level 2	0%	25%	7%	0%	22%	50%	13%
3	0%	0%	0%	0%	0%	0%	5%
6	0%	0%	0%	0%	11%	0%	0%
Total Level 3+	0%	0%	0%	0%	11%	0%	5%
Total	100%	100%	100%	100%	100%	100%	100%
Total	1	4	14	2	9	4	38

Table 31: Hearing Status by Cochlear Implant

Hearing Status	Baha	No	Yes	Grand Total
Mild	0%	2%	0%	1%
Moderate	0%	10%	0%	6%
Moderate/Severe	100%	31%	0%	19%
Moderate-profound	0%	5%	0%	3%
Severe	0%	19%	3%	13%
Severe/Profound	0%	2%	10%	6%
Profound	0%	31%	86%	53%
Total	100%	100%	100%	100%

Table 32: Literacy Level by Cochlear Implant

Literacy level - written	Baha	No	Yes	Total
Pre writing	0%	14%	3%	10%
1a	0%	14%	21%	17%
1b	0%	14%	14%	14%
1c	100%	19%	21%	21%
1d	0%	12%	14%	13%
1e	0%	5%	10%	7%

Literacy level – written cont'd	Baha	No	Yes	Total
Total Level 1	100%	79%	83%	81%
2a	0%	10%	10%	10%
2b	0%	5%	7%	6%
Total Level 2	0%	14%	17%	15%
3	0%	5%	0%	3%
6	0%	2%	0%	1%
Total Level 3+	0%	7%	0%	4%
Total	100%	100%	100%	100%
Total	1	42	29	72

Table 33: Cochlear Implant by Ethnicity

Cochlear Implant	NZ European	Māori	Pacific	Asian	Other	Total
Baha	0.00%	4.00%	0.00%	0.00%	0.00%	1.39%
No	58.33%	60.00%	75.00%	75.00%	0.00%	58.33%
Yes	41.67%	36.00%	25.00%	25.00%	100.00%	40.28%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total	36	25	4	4	3	72

Table 34: Literacy Level by ORS Verification

Literacy level - written	Not Verified	High	Very High	Total
Pre writing	10%	8%	11%	10%
1a	30%	12%	14%	17%
1b	10%	12%	17%	14%
1c	20%	27%	17%	21%
1d	10%	8%	17%	13%
1e	10%	4%	9%	7%

Literacy level - written	Not Verified	High	Very High	Total
Total Level 1	90%	69%	86%	81%
2a	0%	15%	9%	10%
2b	10%	12%	0%	6%
Total Level 2	10%	27%	9%	15%
3	0%	0%	6%	3%
6	0%	4%	0%	1%
Total Level 3+	0%	4%	6%	4%
Total	100%	100%	100%	100%
Total	10	26	35	71

Table 34: Age Group by ORS Verification

Age Group	Not Verified	High	Very High	Total
5-10	60%	38%	60%	53%
11-14	30%	31%	17%	24%
15+	10%	31%	23%	24%
Total	100%	100%	100%	100%
<i>Total</i>	<i>10</i>	<i>26</i>	<i>35</i>	<i>71</i>

Table 35: Hearing Status by ORS Verification

Hearing Status	Not Verified	High	Very High	Total
Mild	10%	0%	0%	1%
Moderate	10%	12%	0%	6%
Moderate/Severe	30%	38%	3%	19%
Moderate-profound	20%	0%	0%	3%
Severe	20%	19%	6%	13%
Severe/Profound	0%	8%	6%	6%
profound	10%	23%	86%	53%
Total	100%	100%	100%	100%
Total	10	26	35	71

Table 36: Literacy Level by Other Disability

Literacy level - written	Other Disability
Pre writing	1
1a	2
1b	1
1c	0
1d	0
1e	0
2a	0
2b	0
3	0
6	0
Grand Total	4

Appendix 3: Sample Population of Deaf Learners in Mainstream Schools

Table 37: School year	KDEC	Van Asch	Total
1	24%	20%	20%
2	40%	10%	25%
3	0%	20%	10%
4	10%	0%	5%
5	0%	10%	5%
6	10%	10%	10%
9	10%	0%	5%
10	0%	20%	10%
11	10%	0%	5%
12	0%	10%	5%
Total	100%	100%	100%
Total Number	10	10	20

Table 38: NZSL & Language Level	KDEC	Van Asch	Total
1. presentence level	40%	40%	40%
2. simple sentence level	30%	50%	40%
3. complex sentence level	30%	10%	20%
Total	100%	100%	100%

Table 39: Principal Language	KDEC	Van Asch	Total
NZSL	40%	30%	35%
SSE/Bridging	20%	70%	45%
Vis-comm	10%	0%	5%
Spoken English	30%	0%	15%
Total	100%	100%	100%

Table 40: Literacy level - written	KDEC	Van Asch	Total
pre-writing	0%	16%	10%
1a	30%	10%	20%
1b	10%	10%	10%
1c	30%	30%	30%
1d	10%	10%	10%
1e	0%	10%	5%
2a	10%	10%	10%
2b	10%	10%	10%
Total	100%	100%	100%

Table 41: Literacy level - reading	KDEC	Van Asch	Total
pre-reading	0%	20%	10%
1	40%	0%	20%
3	0%	10%	5%
4	0%	20%	10%
5	0%	10%	5%
6	10%	0%	5%
8	10%	0%	5%
9	10%	10%	10%
10	10%	0%	5%
16	10%	10%	10%
19	0%	10%	5%
27	0%	10%	5%
30	10%	0%	5%
Total	100%	100%	100%

Table 42: Primary Language of Family	KDEC	Van Asch	Total
English	70%	70%	70%
English/Samoan	0%	10%	5%
NZSL	20%	10%	15%
SASL/NZSL	10%	0%	5%
Somali/English	0%	10%	5%
Total	100%	100%	100%

Table 43: Hearing Status	KDEC	Van Asch	Total
Moderate/Severe	20%	30%	25%
Moderate-profound	20%	0%	10%
Severe/Profound	10%	0%	5%
Profound	50%	70%	60%
Total	100%	100%	100%

Table 44: Cochlear Implant	KDEC	Van Asch	Total
Baha	10%	0%	5%
No	50%	60%	55%
Yes	40%	40%	40%
Total	100%	100%	100%

Table 45: # current cochlear implants	KDEC	VADEC	Total
1	4	3	7
2		1	1
Total	4	4	8

Table 46: Current hearing aid wearer	KDEC	Van Asch	Total
Baha	1		1
No	2	4	6
Yes	5	6	11
Total	8	10	18

Table 47: ORS for hearing loss	KDEC	Van Asch	Total
Not Verified	20.00%	10.00%	15.00%
High	40.00%	30.00%	35.00%
Very High	40.00%	60.00%	50.00%
Total	100%	100%	100%

Table 48: Residence	KDEC	Van Asch	Total
Rural	20%	0%	10%
Town	40%	20%	30%
City	40%	80%	60%
Grand Total	100%	100%	100%

Appendix 4: Resource Used and Proposed

Resources currently available

Teacher Aide

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Used
0	1	2	3	0	0	0
8	0	3	3	0	24	24
10	1	1	2	10	10	20
10.5	0	2	2	0	21	21
12	1	1	2	12	12	24
13	1	0	1	13	0	13
14	1	0	1	14	0	14
15	1	0	1	15	0	15
17	1	0	1	17	0	17
20	0	1	1	0	20	20
Total	7	10	17	81	87	168

Resources proposed

Teacher Aide

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Wanted
0		10	10	0	0	0
5	1		1	5	0	5
12	1		1	12	0	12
14	1		1	14	0	14
15	2		2	30	0	30
20	1		1	20	0	20
Total	6	10	16	81	0	81

Resources currently available

Communicator

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Used
0	4	7	11	0	0	0
4	0	2	2	0	8	8
11	0	1	1	0	11	11
25	1	0	1	25	0	25
Total	5	10	15	25	19	44

RTD

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Used
1	1	1	2	1	1	2
3	4	0	4	12	0	12
5	3	1	4	15	5	20
5.5	0	1	1	0	5.5	5.5
6	1	3	4	6	18	24
6.5	0	1	1	0	6.5	6.5
8	0	2	2	0	16	16
10	1	0	1	10	0	10
11	0	1	1	0	11	11
Total	10	10	20	44	63	107

Resources proposed

Communicator

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Wanted
0	3		3	0	0	0
10		3	3	0	30	30
15	1	7	8	15	105	120
20	1		1	20	0	20
25	1		1	25	0	25
Total	6	10	16	60	135	195

RTD

Hours per week	KDEC	VADEC	Total	Tot KDEC	Tot VADEC	Total Hours Wanted
2	1	0	1	2	0	2
3	2	0	2	6	0	6
5	5	3	8	25	15	40
7.5	0	4	4	0	30	30
10	0	3	3	0	30	30
Total	8	10	18	33	75	108

Resources currently available

Educational Interpreter

Hours per week	KDEC	Van Asch	Total
0	4	10	14
Total	4	10	14

Video-conference/ skype classes

Hours per week	KDEC	Van Asch	Total
0	4	10	0
Total	4	10	14

KIT/NZSL/ Cultural days

Days per year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Used
2	1	0	1	2	0	2
3	1	10	11	3	30	33
4	5	0	5	20	0	20
6	1	0	1	6	0	6
10	1	0	1	10	0	10
11	1	0	1	11	0	11
Total	10	10	20	52	30	82

Resources proposed

Educational Interpreter

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Wanted
0	3	10	13	0	0	0
2	1	0	1	2	0	2
Total	4	10	14	2	0	2

Video-conference/ skype classes

Hours per week	KDEC	Van Asch	Total	Tot KDEC	Tot Van Asch	Total Hours Wanted
0	3	10	13	0	0	0
4	2		2	8	0	8
Total	5	10	15	8	0	8

KIT/NZSL/ Cultural days

Days per year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Wanted
3.5	0	10	10	0	35	35
4	3	0	3	12	0	12
6	1	0	1	6	0	6
8	1	0	1	8	0	8
10	1	0	1	10	0	10
15	1	0	1	15	0	15
Total	7	10	17	51	35	86

Resources currently available

NZSL Language classes

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Used
0	4	6	10	0	0	0
0.5	1	0	1	0.5	0	0.5
1	0	4	4	0	4	4
2	1	0	1	2	0	2
Total	6	10	16	2.5	4	6.5

NZSL Language classes for family

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Used
0	5	7	12	0	0	0
1	0	1	1	0	1	1
2	1	0	1	2	0	2
Total	6	8	14	2	1	3

Resources proposed

NZSL Language classes

Hours per week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Used
0	3	0	3	0	0	0
1	1	6	7	1	6	7
2	2	1	3	4	2	6
4	0	3	3	0	12	12
Total	6	10	16	5	20	25

NZSL Language classes for family

Days per year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Used
0	3		3	0	0	0
1	2	10	12	2	10	12
Total	5	10	15	2	10	12

Resources currently available

DVD language resources

# in year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Resources Used
0	3	3	6	0	0	0
1	1	2	3	1	2	3
2	1	3	4	2	6	8
3	1	2	3	3	6	9
4	1	1	2	4	4	8
Total	7	10	17	10	18	28

Residential programme

Days per Year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Used
0	8	9	17	0	0	0
5	0	1	1	0	5	5
Total	8	10	18	0	5	5

Resources proposed

DVD language resources

# in year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Resources Used
0	1	8	1	0	0	0
3	1	0	1	3	0	3
4	1	0	1	4	0	4
5	2	0	2	10	0	10
Total	5	10	15	17	0	17

Residential programme

Days per Year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Wanted
0	3	5	8	0	0	0
5		5	5	0	25	25
12	2		2	24	0	24
Total	5	10	15	24	25	49

New resources proposed

Deaf Resource Staff (DRS)

Hours Per Week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Wanted
0	1	3	4	0	0	0
1	1	0	1	1	0	1
2	1	7	8	2	14	16
3	1	0	1	3	0	3
5	1	0	1	5	0	5
10	1	0	1	10	0	10
Total	6	10	16	21	14	35

Home Visits by DRS¹⁶

Days per Year	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Days Wanted
0	2		2	0	0	0
2	1		1	2	0	2
4		10	10	0	40	40
9	1		1	9	0	9
Total	4	10	14	11	40	51

Access to Deaf community

Hours Per Week	KDEC	Van Asch	Total	Total KDEC	Total Van Asch	Total Hours Wanted
0	1	0	1	0	0	0
2	2	0	2	4	0	4
3	1	0	1	3	0	3
3.5	0	9	9	0	31.5	31.5
7	1	0	1	7	0	7
10	2	0	2	20	0	20
Total	7	9	16	34	31.5	65.5

¹⁶ Initially this was calculated by days per year, but this has been converted to hours per week for consistency and 3 hours per visit has been assumed.

Appendix 5: Legislation and Policy

The UN Convention on the Rights of Persons with Disabilities, 2007

Article 21: Freedom of expression and opinion, and access to information.

Parties shall take all appropriate measures to ensure that persons with disabilities can exercise the right to freedom of expression and opinion, including the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice, as defined in article 2 of the present Convention, including by:

- (a) Providing information intended for the general public to persons with disabilities in accessible formats and technologies appropriate to different kinds of disabilities in a timely manner and without additional cost;
- (b) Accepting and facilitating the use of sign languages, Braille, augmentative and alternative communication, and all other accessible means, modes and formats of communication of their choice by persons with disabilities in official interactions;
- (c) Urging private entities that provide services to the general public, including through the Internet, to provide information and services in accessible and usable formats for persons with disabilities;
- (d) Encouraging the mass media, including providers of information through the Internet, to make their services accessible to persons with disabilities;
- (e) Recognizing and promoting the use of sign languages.

Article 24: Education

1. States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and life long learning directed to:

- (a) The full development of human potential and sense of dignity and self-worth, and the strengthening of respect for human rights, fundamental freedoms and human diversity;
- (b) The development by persons with disabilities of their personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential;
- (c) Enabling persons with disabilities to participate effectively in a free society.

2. In realizing this right, States Parties shall ensure that:

- (a) Persons with disabilities are not excluded from the general education system on the basis of disability, and that children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability;

(b) Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live;

(c) Reasonable accommodation of the individual's requirements is provided;

(d) Persons with disabilities receive the support required, within the general education system, to facilitate their effective education;

(e) Effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion.

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

(a) Facilitating the learning of Braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring;

(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.

4. In order to help ensure the realization of this right, States Parties shall take appropriate measures to employ teachers, including teachers with disabilities, who are qualified in sign language and/or Braille, and to train professionals and staff who work at all levels of education. Such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities.

5. States Parties shall ensure that persons with disabilities are able to access general tertiary education, vocational training, adult education and lifelong learning without discrimination and on an equal basis with others. To this end, States Parties shall ensure that reasonable accommodation is provided to persons with disabilities.

National Education Guidelines

The National Administration Guidelines (NAGs)

NAG 1

Each board of trustees is required to foster student achievement by providing teaching and learning programmes which incorporate The National Curriculum as expressed in *The New Zealand Curriculum 2007* or *Te Marautanga o Aotearoa*.

Each board, through the principal and staff, is required to:

(a) develop and implement teaching and learning programmes:

to provide all students in years 1-10 with opportunities to achieve for success in all areas of the National Curriculum;

giving priority to student achievement in literacy and numeracy, especially in years 1-8;

giving priority to regular quality physical activity that develops movement skills for all students, especially in years 1-6.

NAG 5

Each board of trustees is also required to:

(a) provide a safe physical and emotional environment for students;

The National Education Goals (NEGs)

The National Education Goals (NEGs) were amended in December 2004 to include the reference to physical activity in clause 5. The National Administration Guidelines (NAGs) were also amended.

Education is at the core of our nation's effort to achieve economic and social progress. In recognition of the fundamental importance of education, the Government sets the following goals for the education system of New Zealand.

NEG 1

The highest standards of achievement, through programmes which enable all students to realise their full potential as individuals, and to develop the values needed to become full members of New Zealand's society.

NEG 2

Equality of educational opportunity for all New Zealanders, by identifying and removing barriers to achievement.

NEG 3

Development of the knowledge, understanding and skills needed by New Zealanders to compete successfully in the modern, ever-changing world.

NEG 4

A sound foundation in the early years for future learning and achievement through programmes which include support for parents in their vital role as their children's first teachers.

NEG 5

A broad education through a balanced curriculum covering essential learning areas. Priority should be given to the development of high levels of competence (knowledge and skills) in literacy and numeracy, science and technology and physical activity.

NEG 6

Excellence achieved through the establishment of clear learning objectives, monitoring student performance against those objectives, and programmes to meet individual need.

NEG 7

Success in their learning for those with special needs by ensuring that they are identified and receive appropriate support.

NEG 8

Access for students to a nationally and internationally recognised qualifications system to encourage a high level of participation in post-school education in New Zealand.

NEG 9

Increased participation and success by Māori through the advancement of Māori education initiatives, including education in Te Reo Māori, consistent with the principles of the Treaty of Waitangi.

NEG 10

Respect for the diverse ethnic and cultural heritage of New Zealand people, with acknowledgment of the unique place of Māori, and New Zealand's role in the Pacific and as a member of the international community of nations.

Appendix 6: PM/Probe Reading Levels and Reading Ages

Level 1	Magenta 1	<p>Reading Ages (R.A.) for PM Levels 1 – 14 are in the range of R.A. 5 year – 6.5 years</p> <p>The fine grading of the PM levelling makes it inappropriate to give a specific Reading Age to the individual levels between PM Levels 1 - 14</p>
Level 2	Magenta 2	
Level 3	Red 1	
Level 4	Red 2	
Level 5	Red 3	
Level 6	Yellow 1	
Level 7	Yellow 2	
Level 8	Yellow 3	
Level 9	Blue 1	
Level 10	Blue 2	
Level 11	Blue 3	
Level 12	Green 1	
Level 13	Green 2	
Level 14	Green 3	
Level 15	Orange 1	R.A. 6.5 - 7.0 years
Level 16	Orange 2	R.A. 7.0 - 7.5 years
Level 17	Turquoise 1	R.A. 7.5 - 8.0 years
Level 18	Turquoise 2	R.A. 8.0 - 8.5 years
Level 19	Purple 1	R.A. 8.5 - 9.0 years
Level 20	Purple 2	R.A. 9.0 - 9.5 years
Level 21	Gold 1	R.A. 9.5 - 10.0 years
Level 22	Gold 2	R.A. 10.0 - 10.5 years
Level 23	Silver 1	R.A. 10.5 - 11.0 years
Level 24	Silver 2	R.A. 11.0 - 11.5 years
Level 25	Emerald 1	R.A. 11.5 - 12.0 years
Level 26	Emerald 2	R.A. 12.0 - 12.5 years
Level 27	Ruby 1	R.A. 12.5 - 13.0 years
Level 28	Ruby 2	R.A. 13.0 - 13.5 years
Level 29	Sapphire 1	R.A. 13.5 - 14.0 years
Level 30	Sapphire 2	R.A. 14.0 - 14.5 years
Probe 14		R.A. 14.5 - 15.0 years
Probe 15		R.A. 15.0 - 15.5 years
Probe 16		R.A. 15.5 - 16.0 years
Probe 17		R.A. 16.0 - 16.5 years
Probe 18		R.A. 16.5 - 17.0 years
Probe 19		R.A. 17.0 - 17.5 years
Probe 20		R.A. 17.5 - 18.0 years

Appendix 7: Written English & Language Level Descriptors

1a (Pre NZ curriculum level 1)

- Attempts to record personal experiences by drawing and/or writing
- Picture contains the meaning for the student.
- Writes random strings of letters, mixing letters, numerals and scribble writing
- Message can't be reconstructed

1b (pre NZ curriculum level 1)

- Attempts to record personal experiences by drawing and writing
- Writing is connected to the picture. They try to read back their own writing
- Uses inventory of known letters, invented words and known words. Uses little or no mock writing. Attempts spaces between words or word-like clusters.
- Message can't be reconstructed

1c (NZ curriculum level 1)

- Meaning of picture is apparent. Writing is clearly linked to picture
- M- units (meaning units) evident. Writing is beginning to convey as sense of story
- Message can be reconstructed

1d (NZ curriculum level 1)

- Message is limited to m-units. Attempts simple sentences
- Meaning may not be clear to the reader but is likely known to the child.
- Some high-frequency words used appropriately. Use of adjectives emerging

1e (NZ curriculum level 1)

- Topic is unified. Message fairly easy to reconstruct
- Writing includes more detail
- Attempts simple sentences
- Begins to revise and edit spelling

2a, 2b, 2c - aligns to NZ curriculum level 2

3 - aligns to NZ curriculum level 3

Language levels

Level 1

- Pre-sentence level
- up to 3 years

Level 2

- Mainly simple and compound sentences. Some complex sentences
- 3 – 5 yrs

Level 3

- Compound complex sentences.
- 5 – 7 years

All three levels align to NZ curriculum level 1

Appendix 8: Glossary

Bridging	Deaf learner uses signs, created by educationalists, for English words that don't exist in NZSL, to provide access to English grammar. Bridging sign is used for teaching English literacy skills.
City, town, rural	Deaf learners in schools in NZ cities over 34,000 were identified as living in cities. Schools in smaller urban areas were counted as towns, and schools outside of towns were listed as rural.
Deaf Learner	The term "deaf learners" is used in this report to refer to the small group of 72 school-aged deaf children in mainstream schools who are not enrolled in the DECs, as well as a smaller sample of 20 whose needs were analysed in greater depth.
DEC	Deaf Education Centre
NZSL	New Zealand Sign Language (NZSL) is a visual language with a complex linguistic structure. The signs that are used convey meaning through hand-shape, orientation, movement and location. Accompanying these signs are facial grammar, expression, use of space, a system of body posture and usually the absence of voice.
SSE	Sign supported English is an oral mode of communication with the addition of key signs. These signs provide an additional visual avenue of meaning. The signs are borrowed from New Zealand Sign Language and are used simultaneously with speech to provide the most meaning during communication