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Bilingual Deaf Education: language policies, linguistic approaches and education models in Europe

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1 Introduction

This chapter discusses sign bilingual education in a European context. First, definitions of bilingualism are discussed, looking at how deaf children's language experiences are changing. Next, language policies are explored critically, because attitudes from many different actors affect how deaf education is organised. Next, we examine different models of sign bilingual education, showing how deaf teachers in particular contribute to bilingual and multilingual pedagogies. Finally, we look at language approaches in use in bilingual deaf education and consider possible futures for sign bilingualism. The examples in boxes in this chapter are from my own teaching experience; they are presented as illustrations of some of the linguistic and social issues arising from bilingual education in practice.

2 What is bilingual education with deaf children?

We can look at hearing children's bilingualism in schools to consider different models of bilingualism (Baker, 2001). In many educational contexts hearing children from minority language communities experience *submersion*, as their home language is not used in the education system. Other education systems are *transitional* bilingual, in that they only acknowledge the use of the home language temporarily with the aim of encouraging the child to become fluent in the wider language of the community. Finally, *maintenance* bilingual approaches seek to maintain both the home language and develop the wider community language through the school system.

How far can this typology be applied to sign languages and deaf children when 95% of deaf children are born to hearing families, most of whom have no knowledge of sign language (Mitchell and Karchmer, 2004)? It is difficult to use terms such as first language and second language in relation to deaf children, because the spoken language of the home may not be a stronger language for deaf children as it may not be accessible to them. Increasingly, in a multi-ethnic Europe, the spoken language of the home may be different from the spoken language of the school system. With more deaf children attending their local school, their opportunities to see and acquire a sign language are becoming rarer, while their opportunities to use listening and speech are becoming more widespread. Many deaf children may be experiencing submersion in relation to sign language, which they have seen and used very little, but some may now have opportunities to be bilingual in more than one spoken language (Crowe, et al., 2014).

The cognitive advantages of bilingualism are shown from studies in co-enrolment schools where both deaf and hearing children have good quality language input in both sign language and spoken language. For example, Tang, Lam and Yiu (2014) have found in the multilingual setting of a co-enrolment school in Hong Kong that a strength in one language supports the development of others; acquiring Hong Kong Sign Language does not delay spoken Cantonese development for deaf children. Making an early start with signed and spoken languages leads to better outcomes for overall language acquisition. In Martin, Balanzategui and Morgan (2014) an exploration of a co-enrolment bilingual school in Madrid shows that many deaf children pay more attention to spoken language as they start to use their cochlear implant (CI) more effectively, on average two years after implantation. Nevertheless, deaf children attending this school from a young age showed steady improvement in Spanish Sign Language (LSE) vocabulary and spoken Spanish vocabulary. In fact, many were bimodal bilinguals using both speech and LSE at different times.

From wider research we know one of the cognitive advantages of bilingualism is the ability to keep both languages "turned on" in the brain and ready to work. Bilinguals can switch attention even when they are in pressurised situations (de Abreu et al., 2012; Melzi, Schick and Escobar, 2017). There appear to be some differences in the way people inhibit the language they are not currently using between bimodal bilinguals (for example hearing children of deaf parents), and unimodal bilinguals (for example deaf people who use two

sign languages) (Benjamin and Morford, 2016). Another advantage of bilingualism is the ability to understand other people's perspectives better and the ability to clarify meaning and avoid communication breakdown. Research has shown that this is true for hearing bilingual children (Siegel et al., 2010), but less research has been done with deaf bilingual children in this regard. For more information about the advantages of early sign language acquisition for deaf children, see Haenel-Faulhaber in this volume.

Many deaf children, though linguistically varied, are not currently receiving a sign bilingual education, even though there are well-founded advantages in being bilingual.

3 Changes within the deaf child population

The deaf child population has changed, partly as a result of medical developments and partly because of more general changes in European society. The introduction of new-born hearing screening in most European countries means that deafness can be identified in the first few weeks or months of life (Vos et al., 2016). This could be used to implement a very early start on acquisition of sign language, as well as of listening through hearing aids and CIs. In practice, however, the medical pathological view of deafness tends to support an early start only with spoken language.

Early screening, which often leads to very early implantation, also supports the focus on spoken language acquisition rather than bilingual bimodal language development. Research from Australia indicates that children implanted at 12 months or less have better word reading using speech at age 5 (Ching, Day and Cupples, 2014). However, there is also good evidence that early sign language aids the development of speech (Davidson, Lillo-Martin and Chen Pichler, 2014); the children in this study had ASL from birth as they were from deaf families, aided with CIs from aged 1 – 3. This research suggests that transitional bilingualism is often in place in deaf education settings.

Furthermore, in most European countries the population has become much more multi-ethnic and multilingual as migration increases from former colonies (Penninx et al, 2016). For deaf children, the combination of these three factors—new-born screening, early implantation, and more diverse languages in Europe—mean that they may grow up using several spoken languages and sometimes also having access to a sign language. Importantly, there are also some children who will not develop any fluent language. These children tend to be those left behind in all education systems: children from poorer socio-economic backgrounds, with less educated parents, and those with additional disabilities (O'Neill, Arendt & Marschark, 2014). The latter group of those with additional disabilities is a much larger group in the deaf population than in the whole child population. For example, in Australia, 26% of deaf children have an additional disability at age 3 (Cupples et al., 2014) compared to 3% in the whole child population (Maguire, 2011).

Although there have been some early identified deaf children for decades, and also multilingual deaf children in many cities, these issues of early screening, early CIs and multilingual families are now becoming much more common across Europe. In addition, a medical viewpoint sees today's deaf children as very different from deaf children in the past, leading to pressure from some to regard previous research about deaf children as less relevant, and the prospect of success with spoken language now described as certain for a large majority (Archbold, 2015; SoundSpace online, 2017). These views can be seen as examples of language policy; though based on research findings, they carry language policies with them.

A final reason we need to be careful when describing the child deaf population is that countries vary in the size of the group they describe as deaf. In the UK, the range of deaf children includes children deaf in one ear and mildly deaf. These two groups make up 47% of all UK deaf children, counted in the biennial Consortium of Research in Deaf Education (CRIDE) survey about deafness levels (2015). Other countries do not count deaf children as much as in the UK and would certainly leave out unilateral and probably mildly deaf children, because they make no special provision for them. This means that international comparisons of the proportion of deaf children using speech and sign must be made carefully, with attempts made to compare truly similar groups of children.

4 Actors in the creation of language policies

When we think about language policy we are not just talking about top-down governmental views. Language policy can also be created from below on a micro scale as well as from above by groups of teachers, organisations and governments (Spolsky, 2007). Language policies often interact with each other and sometimes clash. Language policies include, according to Spolsky, ways of behaving with language, beliefs about language, and ways of managing language.

Looking at top-down language policies, one example we see is the Swedish government's policy towards Swedish Sign Language. The policy maintains that Swedish Sign Language should be established as a first language for deaf children, with official resources used to ensure that hearing parents also learn the language (Svartholm, 2014). Swedish Sign language is considered to be the first language of deaf children (L1), and written Swedish is considered as a second language (L2). The school system in Sweden also introduces other written or signed European languages as L3 and L4.

By way of contrast, in the UK, the government's assumption is that deaf and disabled children will attend their local school. This is seen, for example, in Scotland's Standards in Schools etc. Act (UK Government, 2000), and England's commitment to mainstream education guided by the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (Department for Education, 2015).

Monolingual attitudes from the wider society suggest that parents will find it too challenging to learn another language. Most native English speakers in the UK are not multilingual, so the prospect of learning another language to use at home is intimidating for some. Since the 1985 Swann Report (National Council for Mother Tongue Teaching, 1985), which examined ethnic diversity in the education system, the predominant language policy in the school system has been that minority communities could use their first languages for use at home or just in the early years at school. Thus, the attitude within the UK education system towards bilingualism is distinctly transitional.

Another top-down language policy comes from health services and companies across Europe where a pathological view of deafness prevails. This leads to a practice of providing parents with information about listening and speaking only, described as 'treatment' (Cochlear, 2017), discouraging them from using sign language because of a belief that it may impair spoken language development. Evidence to support either side of this point is still much contested (e.g. Geers et al. 2017, including Comments; Humphreys et al., 2012).

A top-down language policy called 'Informed Choice' has been prevalent in the UK since 2005, and coincided with the development of new-born hearing screening and very early cochlear implantation. This individual consumerist approach sees both languages laid out as options in official government materials, such as England's Early Years Monitoring Protocol (DFES, 2006). The policy assumes that parents would decide between sign and speech, implying often that this is a one time, all-or-nothing early choice. In practice, however, there is no sign language intensive environment available in the early years for deaf children from hearing families to acquire British Sign Language (BSL) (British Deaf Association, 2015). The materials appear balanced, and contain detailed specifications about BSL development, but are rarely used by visiting teachers working with hearing families with deaf babies. No sign input leads to no sign development in the pre-school years, so there is nothing to record.

Teachers also impose language policy through the school system. For example, until about 2006, many local authority services for deaf children in the UK continued to state their policy was 'oralism' (using just speaking and listening) or 'Total communication' (often meaning using any method to suit the child, or using speech with some signs alongside) or 'bilingualism' (which in the 1990s often used the Swedish model of sign first, literacy as second language). The zoning of language policy by local authority led to inequality and caused considerable harm to deaf children. This practice has now often been superseded by the consumerist model of Informed Choice. Teachers' organisations sometimes still express a preference for one approach, but generally this group has become less ideological in the 21st century, or more circumspect (see Leicestershire County Council, 2017, for example). Informed Choice is often a convenient language policy for teachers as it leaves the decisions to parents. However, it does not take into account the strength of medical influences parents

often face to implant and to not sign with their deaf baby. The viewpoint that sign language is a tool rather than a language and culture is still prevalent among many specialist teachers (e.g. Cambridgeshire County Council, 2016).

Other ideas also influence teachers of deaf children. The social model view of disability, where the child is seen as having an impairment, but the disability is caused by barriers created by society, is quite widely taught in initial teacher education (Srikala & Schlessinger, 2017). Ideas about inclusion focus on the role of the class teacher as the teacher of everybody, with no need for groups of children to be taken out of the classroom, or planning different activities for particular groups (Florian, 2015). These wider beliefs about inclusion can be seen as related to language policy: they tend to encourage teachers to a commitment to social justice and an understanding of social barriers, but rarely to an exploration of bilingualism or ways in which children are members of a particular culture, community, or linguistic group.

Surprisingly, perhaps, educational researchers can also promote language policy. This can be seen most clearly in the introductions and conclusions of volumes of empirical research in deaf education. The conclusions, apparently informed by this research, can result in new top-down policies such as Knoors and Marschark (2012), which proposed that sign bilingualism was most suitable for a small group of deaf children with additional disabilities, since, according to the authors, most deaf children can now acquire spoken language. The simultaneous use of speech and sign, referred to as Simcom, is advocated with little empirical evidence (Knoors & Marschark, 2012; Swanwick, 2016). Researchers also create bias in their methodology, often unconsciously. They can do this by not running tests on sign language skills in longitudinal studies of deaf children's language development (Ching, Leigh and Dillon, 2013), or by asking teachers to classify pupils' language use in surveys, when the teachers may not have the sign language skills to be able to accurately identify a particular approach used by their pupils (CRIDE, 2016).

Deaf organisations such as the EUD (this volume), the British Deaf Association (BDA, 2017) and the World Federation of the Deaf (WFD) promote language policies showing, for example, opposition to the use of sign with speech in educational settings and the promotion of sign bilingualism (WFD, 2016). Through EU and UN frameworks, these organisations have had some impact on governments, for example by calling governments to account to implement the sign language clauses of the UNCRPD.

On a micro scale, families create language policies too. Some hearing families decide to create sign language space at home, even though this entails considerable effort. Organisations in the UK such as LASER (the Language of Sign as an Educational Resource) in the 1990s and the National Deaf Children's Society in the 2010s have created the possibility of expressing these views in public and trying them out at social events for children (NDCS, 2017). Other families decide to use both spoken languages of the home with their deaf child. Multilingual deaf families may decide to use two sign languages with their hearing and deaf children who over time also acquire one or more spoken languages from the wider family, kindergarten or school. These family decisions are examples of language policies, requiring a concerted effort to maintain.

The complex picture of language policies shows that they are often not imposed from above, as Spolsky pointed out (2007); there are many competing groups creating and changing *beliefs* about sign language and sign bilingualism. It is important to look at how social attitudes to minority and signed languages develop in different institutions, cultures, and communities. We need to consider the effect that these views may have upon changing the ways in which deaf and hearing people *behave* with language and their different perspectives on *managing* the minority language. Both top-down and bottom-up language policies remain a crucial area to be explored in relation to deaf children and language use.

5 Different models of sign bilingual provision

Across Europe there are many different types of provision available where sign bilingualism can exist (DeSign Bilingual, 2014). Deaf schools appear to be on the decline in many European countries, though there is little data available to document this. In Scandinavian and German deaf schools, there is a strong focus on contrastive analysis of sign and spoken or written language. This is less noticeable in the UK, probably because of the lesser experience of

teachers with the meta-language needed to discuss language even in English. Explicit teaching of a sign language and information about Deaf culture are features of deaf schools rarely seen in other settings.

In an ordinary college, there are five levels of English class for deaf students taught in BSL by bilingual deaf and hearing teachers. The group I am teaching are intermediate students of English with varying levels of fluency in BSL because of their different educational experiences. The target for one lesson is the use of structures such as: *As I was crossing the bridge, I bumped into my friend Salma*. The class uses BSL to discuss the use of the past perfect and past simple tenses in English and the punctuation. Students model other similar sentences in Signed English, which I type on a word processor, displayed on the whiteboard. Students discuss in BSL ways to improve the accuracy of their English sentences, and I amend the text. The students receive a copy of the jointly constructed text at the end of the class.

Ordinary schools and resourced schools sometimes have deaf sign bilingual children who use interpreters. The qualifications of the interpreters vary depending on the particular country's viewpoint towards fluency in sign language. In these settings, deaf children are generally expected to acquire the language without any explicit focus on it (Tomasuolo et al., 2013). However, the European Union of Deaf Youth (2016) reports a positive example from Turin in Italy where both deaf and hearing pupils receive daily sign language tuition. More generally, the interpreter, often unqualified, becomes the language model. The deaf child rarely receives instructions in these settings about how to manage a sign language interpreter, how to ask questions of the teacher, or how to use lip-reading when watching the interpreter for a summary. The very challenging interpreting assignments in a classroom with up to 30 participants means that the usually unqualified interpreters are not able to keep up with classroom dialogue and discussion (de Wit, 2011; Schick, 2005). Even when countries recognise sign language, the status of educational interpreters remains low: their pay is low, their qualifications are not usually understood by employers, they are not usually supervised, and they have few prospects for promotion. Not surprisingly, most qualified interpreters only work in school settings if there is no other work available. In countries such as the UK where the majority of severely and profoundly deaf children are now mainstreamed (CRIDE, 2016), the combination of mainstreaming, no sign language tuition, and unqualified interpreters has led to a rapid loss of fluency in BSL compared to the generation educated in deaf schools in the 1970s. For more information about sign language interpretation provision in education as well as the potential and limitations of interpreter use in inclusive educational settings, see de Wit in this volume.

The influence of inclusive education has also led to the option of co-enrolment, available in some countries (Madrid: Martin, Balanzategui and Morgan, 2014; Hong Kong: Tang, Lam and Yiu, 2014, etc.). Ways of implementing co-enrolment vary, but one approach involves two teachers, one deaf and one hearing, working together in one classroom. Again, there is no explicit focus on sign language tuition, but both modes of the language of the wider community are potentially available to the deaf child. The teaching background of the deaf teacher is unfortunately often subordinate, but ideally both spoken and written modes of the community language and sign language will be available to all deaf and hearing children. Contrastive analysis comparing the languages and explicit teaching of the sign language could be used in these settings, but so far there have been few studies in this area.

Signing schools, meaning a school for both deaf and hearing children in equal numbers, are a possibility for the future. Signing schools run by deaf professionals take a step further than co-enrolment models by encouraging bilingual deaf professionals to teach deaf and hearing children using sign language, with spoken and written language being available as well. This is most likely to be of interest to parents of hearing children when the educational outcomes for deaf bilingual children are demonstrated to be better than ordinary schools. We could imagine this may happen in countries, which strongly support the national sign language and implement a bilingual, deaf cultural pedagogy. This process has happened in Scotland in relation to the spoken language Gaelic; parents who do not speak Gaelic make up the vast majority of families using Gaelic Medium Schools (O'Hanlon, McLeod and Paterson, 2010).

1 Resourced schools in the UK, or Centre schools in Sweden, are ordinary schools with provision for a group of deaf children who mainly learn in the ordinary classroom.

A healthy development in sign bilingual education would be to have many of these and other existing models available in each country.² In practice, however, few of these examples exist, and the children who attend settings involving a bilingual approach have often experienced interrupted schooling, only coming to a bilingual setting after the default mainstream schools, which only involve the use of spoken language, have failed.

6 Deaf pedagogies in sign bilingual programmes

Early work on sign bilingualism in the 1980s in the UK often explored the views of native deaf sign language users as language models (LASER, 1988). There were a few teachers of deaf children who were also BSL users, but there remained barriers which prevented deaf people from becoming qualified as teachers, including medical lip-reading tests and strong discouragement from the British Association of Teachers of the Deaf (Teacher of the Deaf, 1973; also see Leeson and Danielsson in this volume). Since that time, there has been surprisingly little focus on deaf teachers in sign bilingual literature. Although there has been some acknowledgement of the errors of the Milan congress³ in expelling deaf teachers from schools and for the century of enforced monolingual oral policies, there has not been a period of truth and reconciliation. Most teachers of deaf children are aware of the negative history of oralism, but it is rarely discussed in the profession. Overt discrimination from professional organisations of teachers for deaf children may have ended in the 1970s, but many small measures remain to discourage deaf people from working with deaf children. Acts of discrimination against deaf teachers in employment continue today. For example, employers sometimes question whether a deaf teacher will be able to teach speech, or they exclude qualified deaf teachers of deaf children by not calling them to interview and instead appointing a hearing teacher with no specialist qualification. At other time, jobs are advertised only internally within a local authority where no deaf teachers work (Mervyn, 2017) and schools sometimes do not provide reasonable accommodation to make the interview process or work placement accessible.

Ladd has set out (2013) what appears to be an essentialist view that deaf teachers innately have resources for teaching deaf children which hearing teachers do not. Deaf pedagogies are proposed, including showing deaf children how they can overcome barriers through resilience and how they can view themselves as normal in their development and not in need of remedial treatment. Other strategies are outlined by Ladd (2013) in more depth, such as the timing of communication or strategies to make a safe space for deaf children, peer teaching, use of drama and storytelling, or setting high standards. Detailed work from Ladd in this area has not yet been published.

There is useful research evidence from Sweden (Lindahl, 2015), France (Mugnier, 2006) and Chile (Moraga, 2017) about what deaf pedagogies may look like in practice.

Lindahl (2015) used 17 hours of recordings of signed discussion in science classes in a deaf school with two deaf teachers to evaluate strategies used with deaf teenagers. Lindahl sees translanguaging as a pedagogical resource, defining it as not language mixing, but moving between sign language, fingerspelling from the spoken language and writing. Teachers need to have a high level of fluency in both languages as well as subject knowledge to engage and move the children to a clearer understanding of scientific concepts. She sees depicting signs as being particularly important in developing dialogic understanding of scientific concepts, more important than agreed lexicons of sign language technical terms.

Mugnier (2006), in contrast, sees sign bilingualism as including spoken and sign language, fingerspelling and pictorial resources. Using classroom recordings, she finds that hearing teachers of deaf children largely ignore the French sign language (LSF) from the deaf children, attending only to the spoken language elements, so tacitly encouraging a spoken language preference. Deaf teachers, on the other hand, attend to all channels in co-construction of meaning in classroom dialogue. For example, they move from French writing to LSF to spoken French to LSF back to writing as a common practice, allowing the child to

² A number of such models are presented through concrete good practice example descriptions in the 3rd section of this volume.

³ The first international conference of deaf educators held in Milan, Italy in 1880.

respond in whatever language and mode they prefer. This researcher does not think it is only deaf teachers who could carry out these loops and co-constructions, but deaf teachers are more likely to have the necessary combination of linguistic skills and ability to promote pleasure in learning.

Moraga (2017) outlines the principles of deaf pedagogies: Deaf-same, egalitarianism, collectivism, visual communication, holistic and child-centred education, and interculturalism. She finds performativity, narrative, and humour used in classes with deaf teachers. These teachers, 15 deaf educators from Chile, created a safe deaf space in their classrooms, attended to specific pupil needs, and demonstrated how to live in deaf and hearing cultures.

This is an area which merits additional study, because where there are sign bilingual environments, teaching approaches are likely to become more bimodal as well as multilingual due to the changing nature of the child deaf population in Europe.

7 Language approaches in sign bilingual programmes

The literature shows there are many different language approaches within sign bilingual programmes, some informed by language policies from the past, top-down and bottom-up. Other approaches are linked to particular theories of language acquisition. Some (e.g. Plaza-Pust, 2016; Ardito et al., 2008) are generative, following the views of Chomsky that all children have an innate language acquisition device. Others (e.g. Bagga-Gupta, 2002; Swanwick, 2016) are social constructionist, drawing on theories of Vygotsky and stressing the importance of the social relationships with more experienced language users in a safe and challenging environment.

A widespread view initially informed by language policy from Scandinavia, which has spread through Europe's deaf community, is that the languages should be separated. This view has been critiqued by Bagga-Gupta (2002), who based her findings on deaf school classroom observations of language mixing. The view informing early Scandinavian sign bilingual education proposes that the first language of deaf people is sign and the second is the written form of the wider community's spoken language (Svartholm, 2014). Alongside this view is a discouragement of language blending in simultaneously speaking and signing. However, the existence of many deaf children with good speaking and listening skills can provide challenges to this viewpoint. Humphries (2013), on the other hand, from his perspective on practices in the USA, proposes that deaf teachers fluent in sign should also include speaking and listening activities as part of their teaching.

Mehmet is a Turkish student who arrived in the UK aged 10. He had previously worked as a shepherd and not attended school. The first hearing aids he received were not effective, so by 16 he had only a few phrases in spoken English and a few BSL phrases. He was at risk of being language-less. An intensive language programme was started with him at college: one hour each week spent one-on-one with a native BSL user working on a BSL programme and one hour a week with a teacher of deaf students using a language experience approach based on spoken English and literacy. Many of the written stories we constructed were based on his early life. His other classes were interpreted by well-qualified support workers with fluency in BSL and English. At the same time a review of his hearing aids allowed Mehmet to hear consonants for the first time. His spoken language in English and BSL developed well, alongside growing friendships with deaf and hearing students. Finally, he developed spoken Turkish which he used at home with his father.

Plaza-Pust is a German researcher who has meticulously charted the developmental profiles of deaf children in Berlin School for Deaf Children (2016), a programme, which emphasises the development of German Sign Language (DGS) and written German. Using a generative framework, she found little evidence of language mixing, seeing it only at points of transition between developmental stages. Her data was collected between 2001–2005, so it may not adequately take into account deaf children who use speech, though she does suggest the

influence of hearing teachers' signed German may lead to some simplified written patterns showing influence from the spoken language.

An ecological language profiling approach is also favoured by Swanwick (2016; 2017), who proposes that teachers investigate the languages available to the child at home and school in much more detail. Swanwick, in contrast to Plaza-Pust, regards simultaneous communication in speech and sign as a naturally occurring or pedagogical tool, which adds to the total linguistic resources held by the child. Her work more accurately reflects the multilingual, multicultural background of many European deaf students, but it does not focus on the teachers' skill level in any particular language.

Simultaneous communication (simcom) has received more empirical focus recently with some contradictory findings. Mastrantuono, Saldaña and Rodríguez-Ortiz (2017) found that Spanish deaf early implanted CI users (5) performed as well at comprehension of speech with or without simcom, whereas deaf native sign language users (5) performed to this level in Spanish sign language (LSE). However, the methodology of lab experiments often uses expert models who can speak and sign very fluently and simultaneously, rather than the real-life teachers who often have gaps and discontinuities caused by poor fluency in a signed language and weak co-ordination with a spoken one. Wang et al. (2017) have shown that amongst 36 11–14 year old students who watched a story in speech with signing and again with ASL, that comprehension was significantly better in the ASL mode than the simcom.

Even in many deaf schools there is often not a strong focus on actual development of the signed language, just an assumption it will be a useful tool (Audeoud et al., 2016). Evidence comes from very limited, if any, time devoted to the study of sign language as a school subject, not administering examinations in the language. These attitudes can be seen as legacies of oralism.

The English class at City College is producing subtitles for videos they have made in BSL thus using both languages. In the videos, they are telling stories about their lives and their contact with Deaf communities. The audience for these videos is their hearing families, who do not use BSL. The students report these videos have an important impact on their families' understanding of who they are.

In the wider applied linguistics research community, there has recently been much interest in translanguaging as a strategy used by bilingual and multilingual people (García and Wei, 2014). Researchers in deaf education contexts have started to use this term for the many examples of movement between modes, languages, and forms in deaf education sign bilingual settings (e.g. Swanwick, 2016). However, as we have seen, researchers use the term in different ways: Lindahl does not include speech, whereas Swanwick does. However, translanguaging has faced criticisms that can be argued also in the context of deaf education (Rampton, 2017). Concretely, many hearing practitioners teaching in sign language are not fluent sign language users, which could lead to translanguaging being used as a positive term for teachers' lack of proficiency in sign language. The term often hides power dynamics that exist between speech and sign, with sign language grammar and vocabulary placed at risk of vanishing if sign and speech are used together by hearing teachers who are not fluent in sign language.

8 Possible futures for sign bilingualism

Deaf communities have repeatedly charged deaf education providers with not listening to their concerns, one example of which is the low signing level of hearing teachers of deaf children (British Deaf Association, 2015; EUD, 2017). Although there are now European Framework of References (CEFR) sign levels available online (Prosign, 2015), the profession of teachers of deaf children remains generally uninterested in these levels, partly because of the preference for simcom and partly because of the lack of focus on the nature of this mixed mode. Currently, the minimum level of BSL skill set for specialist teachers of deaf children by the different countries in the UK is Signature level 1, achievable after only 50 hours of study of the language (Scottish Government, 2007; National College for Teaching and Leadership, 2015). Many hearing teachers of deaf children see sign language as a tool, and they do not

attend to requirements from deaf communities to raise their skills in BSL. There is considerable social segregation between deaf signing people and teachers, even in deaf school staff rooms. If there is to be a future for sign bilingualism, some areas for action include addressing issues of language fluency in sign, increasing the number of deaf teachers, and increasing the social contact between hearing teachers and deaf communities.

The degree of polarisation in research about deaf children and in relation to their education is still severe. Language policies and pedagogic practices could change through a combination of top-down actions (e.g. legislation) and bottom-up activities (e.g. co-enrolment projects) to influence the wider hearing society to embrace sign bilingualism and bimodality. This has been illustrated in Hong Kong and in other small-scale experiments. The more positive attitude towards sign language in the USA, along with more stringent legislation calling for qualified interpreters, has led to sign bilingualism being more widespread in the USA (Rosen, 2006). The European Agency for Special Needs and Inclusive Education, in contrast, encourages countries to move from a special school model to more inclusive practices in the child's local area, without considering the implications for deaf children who use sign language (European Agency for Special Needs and Education, 2017).

The Hong Kong example (Jockey Club 2010), although initially funded by a privately financed research programme, shows how it is possible for attitudes toward sign bilingualism and sign language in a culture to change. Deaf communities in Europe could engage more in shaping language policy, entering the teaching workforce, and putting forward their demands for minimum skill levels for teachers of deaf children and interpreters. For example, country reports for the UNRCPD monitoring could include information about sign language use, numbers of deaf children learning through sign in groups or schools, and employment of deaf teachers (UN Human Rights Office, 2017). Maintaining previous language policies relating to a time before early cochlear implantation will not lead to success. Applying article 24 of the UNCRPD to the involvement of teachers with disabilities in the education system, on the other hand, may prove more fruitful.

At the 2010 International Congress of the Education of the Deaf (ICED) a statement was made to apologise for the brutalities of the oral-only period (ICED 2010). This statement was requested by deaf organisations, but greeted with incredulity by many of the conference delegates. In deaf education, there has been no period of truth and reconciliation in relation to deaf children's lives. Most teachers of deaf children have not engaged with a process of reflecting on these historical mistakes.

A more rigorous focus on the still unfortunately high number of language-less or linguistically restricted deaf children of today may help some hearing deaf education professionals move towards reconciliation. Another way forward is for education authorities and governments to listen to deaf community language policies, particularly in the area of sign fluency and the need for more deaf signing teachers. After a process of true engagement with these issues, sign bilingual policies and practices will have more potential for success.

Bibliography

Archbold, S. (2015). Being a Deaf Student: Changes in characteristics and needs. In: H. Knoors, & M. Marschark, (Eds.) *Educating Deaf Learners: Creating a Global Evidence Base*. New York: Oxford University Press.

Ardito, B., Caselli, C., Vechietti, A. & Volterra, V. (2008). Deaf and hearing children reading together in preschool. In: C. Plaza-Pust and E. Morales-López (eds). *Sign bilingualism: language development, interaction and maintenance in sign language contact situations*. Amsterdam: John Benjamins.

Audeoud, M., Becker, C., Krausneker, V. & Tarciová, D. (2016). *Bi-Bi Toolbox. Stimuli for Bimodal Bilingual Education*. Vienna: University of Vienna.

Bagga-Gupta, S. (2002). Explorations in bilingual instructional interaction: a sociocultural perspective on literacy. In: *Learning and Instruction*. 12, pp. 557–587.

Baker, C. (2001). *Foundations of Bilingual Education and Bilingualism*. Clevedon: Multilingual Matters.

Benjamin, A. & Morford, J. (2016). Look both ways before crossing the street: Perspectives on the intersection of bimodality and bilingualism. In: *Bilingualism*. 19 (2), pp. 243–245.

British Deaf Association (2015). Submission to the Scottish Parliament: attainment of school pupils with a sensory impairment. Available at: https://bda.org.uk/wp-content/uploads/2017/03/BDA_Scotland_-_Education_Submission_Report-April-2015.pdf (Accessed on 18 September 2017).

British Deaf Association (2017) BDA response to the List of issues in relation to the initial report of the United Kingdom of Great Britain and Northern Ireland: government response. London. Available at: <https://bda.org.uk/wp-content/uploads/2017/07/BDA-Response-to-CRPD.pdf> (Accessed on 18 September 2017).

Cambridgeshire County Council (2016) Communication Policy for the support of D/deaf children and young people. Available at: https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/residents/children-and-families/Hearing_communication_policy.pdf?inline=true (Accessed on 18 September 2017).

Ching, T., Leigh, G. & Dillon, H. (2013). Introduction to the Longitudinal Outcomes of Children with Hearing Impairment (LOCHI) study: Background, design, sample characteristics. *International Journal of Audiology*, 52: Sup 2, pp. 4–9.

Ching, T., Day, J. & Cupples, L. (2014). Phonological awareness and early reading skills in children with cochlear implants. *Cochlear Implants International*. 15, pp. 1–29.

Cochlear (2017). Importance of Early Treatment. Addlestone, UK. Available at: <http://www.cochlear.com/wps/wcm/connect/uk/home/understand/my-child-has-hl/importance-of-early-treatment> (Accessed on 18 September 2017).

Consortium for Research in Deaf Education (2015/2016). CRIDE reports on 2015/2016 surveys on educational provision for deaf children. Available at: http://www.ndcs.org.uk/professional_support/national_data/cride.html#contentblock1 (Accessed on 18 September 2017).

Crowe, C., McKinnon, D., McLeod, S. & Ching, T. (2014). Multilingual children with hearing loss: Factors contributing to language use at home and in early education. *Child Language Teaching and Therapy*. 29 (1), pp. 111–129.

Cupples, L., Ching, T., Crowe, K., Seeto, M., Leigh, G., Street, L., Day, J., Marnane, V. & Thomson, J. (2014). Outcomes of 3-Year-Old Children with Hearing Loss and Different Types of Additional Disabilities. *Journal of Deaf Studies and Deaf Education*. 19 (1), pp. 20–39.

Davidson, K., Lillo-Martin, D. & Chen-Pickler, D. (2014). Spoken English Language Development Among Native Signing Children with Cochlear Implants. *Journal of Deaf Studies and Deaf Education*. 19 (2), pp. 238–250.

de Abreu, P., Cruz-Santos, A., Tourinho, C., Martin, R. & Bialystok (2012). Bilingualism Enriches the Poor: Enhanced Cognitive Control in Low-Income Minority Children. *Psychological Science*. 23(11), pp. 1364–1371.

Department for Education and Science (DFES) (2006). Early Support: monitoring protocol for deaf babies and children. Available at: http://www.ndcs.org.uk/professional_support/other_academic_and_professional_resource/s/education_resources.html#contentblock4 (Accessed on 18 September 2017).

Department for Education (2015) Special Educational Needs and Disability Code of Practice, 0 – 25 years. London: DofE. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf Accessed on 18 September 2017).

De-Sign Bilingual (2014). Sign Bilingual Best Practice in Schools. Vienna: University of Vienna. Available at: <http://www.univie.ac.at/map-designbilingual/index.php?l=en> (Accessed on 18 September 2017).

de Wit, M. (2011). A sign language interpreter in inclusive education: the view of deaf persons on their quality of life. Summary of MA: Eumasli. Available at: www.mayadewit.nl/s/Maya-de-Wit-MA-Thesis-Summary-for-web.pdf (Accessed on 18 September 2017).

European Agency for Special Needs and Inclusive Education (2017). Agency position on inclusive education systems. Available at: <https://www.european-agency.org/about-us/who-we-are/position-on-inclusive-education-systems> (Accessed on 18 September 2017).

European Union of the Deaf (2017). Position paper on Education. Available at: <http://www.eud.eu/about-us/eud-position-paper/education-position-paper/> (Accessed on 18 September 2017).

European Union of Deaf Youth (2017). Position Paper on Inclusive Education. Available at: <http://bit.ly/2vGG9L6> (Accessed on 18 September 2017).

Florian, L. (2015). Conceptualising inclusive pedagogy: The inclusive pedagogical approach in action. In: JM Deppeler, T Loreman, R Smith and L Florian (Eds). *Inclusive Pedagogy Across the Curriculum*. Vol. 7, Emerald Group Publishing, pp. 11–24.

García O. & Wei L. (2014). Translanguaging and Education. In: *Translanguaging: Language, Bilingualism and Education*. Palgrave Macmillan, London.

Geers, A., Mitchell, C., Warner-Czyz, A., Wang, N. & Eisenberg, L., (2017). Early sign language exposure and cochlear implantation Benefits. In: *Paediatrics*. 140 (1), June 2017. Available at: <http://pediatrics.aappublications.org/content/early/2017/06/08/peds.2016-3489> (Accessed on 18 September 2017).

Humphries, T. (2013). Schooling in American Sign Language: A paradigm shift from a deficit model to a bilingual model in deaf education. In: *Berkeley Review of Education*, 4 (1), pp. 7–33.

Humphries, T., Kushalnagar, P., Mathur, G., Napoli, J., Padden, C., Rathmann, C. & Smith, S. (2012). Language acquisition for deaf children: Reducing the harms of zero tolerance to the use of alternative approaches. In: *Harm Reduction Journal*. 9 (16). Available at: <https://harmreductionjournal.biomedcentral.com/articles/10.1186/1477-7517-9-16> (Accessed on 18 September 2017).

ICED (2010). Vancouver 2010; A New Era: Deaf Participation and Collaboration. Available at:

<http://deafwellbeing.vch.ca/wp-content/uploads/2016/01/2010-07-ICED-Resolution-A-New-Era-document.pdf> (Accessed on 18 September 2017).

Jockey Club (2010). Sign bilingualism and Co-enrolment in Deaf Education Programme. Available at: http://www.cuhk.edu.hk/cslds/jcslco/index_en.html (Accessed on 18 September 2017).

Knoors, H. & Marschark, M. (2012). Language Planning for the 21st Century: Revisiting Bilingual Language Policy for Deaf Children. In: *Journal of Deaf Studies and Deaf Education*. 17 (3), pp. 291-305. Available at: <https://academic.oup.com/jdsde/article-lookup/doi/10.1093/deafed/ens018> (Accessed on 18 September 2017).

Ladd, P. (2013). A Final Frontier - Can Deafhood Pedagogies Revolutionise Deaf Education? Available at: <http://deafhoodfoundation.org/vlog/wp-content/uploads/2013/10/Fremont-Deaf-Pedagogies-2013COPYRIGHTED.pdf> (Accessed on 18 September 2017).

Language of Sign as an Educational Resource (LASER) (1988). Deaf Adults Working in Education. Wembley: Adept Press.

Leicestershire County Council (2017.) Hearing impaired and deaf children. Available at: <https://www.leicestershire.gov.uk/education-and-children/special-educational-needs-and-disability/education-and-childcare/hearing-impaired-and-deaf-children> (Accessed on 18 September 2017).

Lindahl, C. (2015). Signs of Significance: A Study of Dialogue in a Multimodal, Sign Bilingual Science Classroom. University of Stockholm PhD thesis. Available at: <http://su.diva-portal.org/smash/get/diva2:844591/FULLTEXT01.pdf> (Accessed on 18 September 2017).

Maguire, B. (2011). Families with a child with a disability. LSAC Family Statistical Report. Australian Institute of Family Studies. Available at: <http://www.growingupinaustralia.gov.au/pubs/asr/2011/ch4asr2011.pdf> (Accessed on 18 September 2017).

Martin, M., Balanzategui, M. and Morgan, G. (2014). Sign Bilingual and Co-enrolment Education for Children with Cochlear Implants in Madrid, Spain. In: M Marschark, H Knoors and G Tang (Eds.). *Bilingualism and Bilingual Deaf Education*. New York: Oxford University Press. Chapter 15.

Mastrantuono, E., Saldaña D. & Rodríguez-Ortiz, I. (2017). An Eye Tracking Study on the Perception and Comprehension of Unimodal and Bimodal Linguistic Inputs by Deaf Adolescents. In: *Frontiers in Psychology: Language Sciences*. 8 (144), p. 1-14. Available at: <http://journal.frontiersin.org/article/10.3389/fpsyg.2017.01044/full> (Accessed on 18 September 2017).

Melzi, G., Schick, A. & Escobar, K. (2017). Early Bilingualism Through the Looking Glass: Latino Preschool Children's Language and Self-Regulation Skills. In: *Annual Review of Applied Linguistics*. Published online: 21 June 2017, pp. 1-17.

Mervyn, C. (2017). The challenges for D/deaf teachers wishing to become teachers of the deaf. Paper at Adept / Scottish Sensory Centre conference Edinburgh, 24.6.17. Available at: <http://www.ssc.education.ed.ac.uk/courses/deaf/conf17/mervyn.pdf> (Accessed on 18 September 2017).

Mitchell, R. & Karchmer, M. (2004). Chasing the Mythical Ten Percent: Parental Hearing Status of Deaf and Hard of Hearing Students in the United States. In: *Sign Language Studies*. 4(2), pp. 138-163.

Moraga, M. (2017). The construction of Deaf pedagogies: principles and practices. Poster at Adept / Scottish Sensory Centre conference Edinburgh, 24.6.17.

Mugnier, S. (2006). Le bilinguisme des enfants sourds: quelques freins aux possibles moteurs. In : *GLOTTOPOL Revue de sociolinguistique en ligne* 7, pp. 144–159. Available at : http://glottopol.univ-rouen.fr/telecharger/numero_7/gpl7_08mugnier.pdf (Accessed on 18 September 2017).

National College for Teaching and Leadership (2015). Specification for mandatory qualifications for teachers of children and young people who are deaf. London. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/480550/Hi_MQ_Spec_NOV_2015_FINAL.pdf (Accessed on 18 September 2017).

National Council for Mother Tongue Teaching (1985). The Swann report: Education for all? In: *Journal of Multilingual and Multicultural Development*, 6:6, pp. 497–508.

NDCS (2017). Using sign language in family life. Available at: http://www.ndcs.org.uk/family_support/communication/sign_language/family_sign_language/family_life.html (Accessed on 18 September 2017).

O’Hanlon, F., McLeod, W. & Paterson, L. (2010). Gaelic-medium Education in Scotland: choice and attainment at the primary and early secondary school stages. Bòrd na Gàidhlig/ University of Edinburgh. Available at: http://www.research.ed.ac.uk/portal/files/3275316/Gaelic_medium_education_in_Scotland.O_Hanlon.McLeod.Paterson..pdf (Accessed on 18 September 2017).

O’Neill, R., Arendt, J. & Marschark, M. (2014). Report from the Achievement and Opportunities for Deaf Students in the United Kingdom. University of Edinburgh: Nuffield Foundation. Available at: <http://www.nuffieldfoundation.org/sites/default/files/files/EDU%2037468%20-%20Nuffield%20Report%20MASTER%20v3.pdf> (Accessed on 18 September 2017).

Penninx, R., Kraal, K., Martiniello, M. & Vertovec, S. (2016). *Citizenship in European Cities*. Abingdon: Routledge.

Plaza-Pust, C. (2016). *Bilingualism and deafness*. Preston: Ishara Press.

Prosign (2015). Sign languages and the common European Framework of Reference for Languages. Available at: <http://www.ecml.at/ECML-Programme/Programme2012-2015/ProSign/tabid/1752/language/en-GB/Default.aspx> (Accessed on 18 September 2017).

Rampton, B. (2017). Crossing thirty years later. Working papers in urban languages and literacies. Paper 210. King’s College London.

Rosen, R. (2006). An Unintended Consequence of IDEA: American Sign Language, the Deaf Community, and Deaf Culture into Mainstream Education. In: *Disability Studies Quarterly*. 26 (2). Available at: <http://dsq-sds.org/article/view/685/862> (Accessed on 18 September 2017).

Schick, B. (2005). Look who’s being left behind: Educational Interpreters and Access to Education for Deaf and Hard of Hearing Students. In: *Journal of Deaf Studies and Deaf Education*. 11 (1), pp. 3–20.

Scottish Government (2007). Guidance on appropriate qualifications for teachers of children and young persons who are hearing impaired, visually impaired, or both hearing and visually impaired. Edinburgh. Available at: <http://www.gov.scot/Resource/Doc/164398/0044786.pdf> (Accessed on 18 September 2017).

Siegel, M., Surian, L., Matsuo, A., Geraci, A., Iozzi, L., Okumura, Y. & Itakura, S. (2010). Bilingualism Accentuates Children’s Conversational Understanding. *Plos One*. Available at: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0009004> (Accessed on 18 September 2017).

SoundSpace Online (2017). *Communication and Language Development*. Nottingham: Ear Foundation. Available at:

<http://www.soundspaceonline.com/resources/page/9/communication-and-language-development> (Accessed on 18 September 2017).

Spolsky, B. (2007). Towards a Theory of Language Policy. *Working Papers in Educational Linguistics*. 22 (1), pp. 1–14.

Srikala, N. & Schlessinger, S. (2017). When theory meets the 'reality of reality': reviewing the sufficiency of the social model of disability as a foundation for teacher preparation for inclusive education. In: *Teacher Education Quarterly*. 44 (1), pp.88–100.

Svartholm, K. (2014). 35 years of bilingual deaf education – and then? In: *Educar em Revista*. Available at: http://www.scielo.br/scielo.php?pid=S0104-40602014000600004&script=sci_arttext&tlng=en (Accessed on 18 September 2017).

Swanwick, R. (2016). *Languages and Linguaging in Deaf Education: a framework for pedagogy*. Oxford: Oxford University Press.

Swanwick, R. (2017). Translanguaging, learning and teaching in deaf education. In: *International Journal of Multilingualism*, 14 (3), pp. 233–249.

Tang, G. (2017). Sign Bilingualism in Deaf Education. From Deaf Schools to Regular School Settings. In: O García, A Lin and S May (Eds.), *Bilingual and Multilingual Education*, *Encyclopedia of Language and Education*. Cham, Switzerland: Springer International.

Tang, G., Lam, S. & Yiu, C. (2014). Language Development of Deaf Children in a Sign Bilingual and Co-enrollment Environment. In: M Marschark, H Knoors and G Tang (Eds.). *Bilingualism and Bilingual Deaf Education*. New York: Oxford University Press. Chapter 13.

Teacher of the Deaf (1973). Letters to the Editor. In: *Journal of the National College of Teachers of the Deaf*. 71 (422), pp. 408–409.

Tomasuolo, E., Valeri, G., Di Renzo, A., Pasqualetti, P. & Volterra, V. (2013). Deaf Children Attending Different School Environments: Sign Language Abilities and Theory of Mind. In: *Journal of Deaf Studies and Deaf Education*. 18 (1), pp. 12-29. Available at: <https://academic.oup.com/jdsde/article-lookup/doi/10.1093/deafed/ens035> (Accessed on 18 September 2017).

UK Government (2000) Standards in Scotlands Schools etc. Act 2000. See Section 15. Available at: <http://www.legislation.gov.uk/asp/2000/6/contents> (Accessed on 18 September 2017).

UN Human Rights Office (2017). CRPD List of Issues. Geneva. Available at: http://tbinternet.ohchr.org/_layouts/treatybodyexternal/TBSearch.aspx?Lang=en&TreatyID=4&DocTypeID=18 (Accessed on 18 September 2017).

Vos, B., Senterre, C., Lagasse, R., Tognola, G. & Levêque, A. (2016). Organisation of new-born hearing screening programmes in the European Union: widely implemented, differently performed. In: *The European Journal of Public Health*. 26 (3), pp. 505–510.

Wang, Y., Hartman, M., Jahromi, L. & Tversky, B. (2017). Better Story Recall by Deaf Children with Unimodal Communication. In: *Journal of Developmental and Physical Disabilities*. 29 (5), pp. 699–720.

World Federation of the Deaf (2016). Position Paper on the Language Rights of Deaf Children. Helsinki. Available at: <https://wfdeaf.org/databank/policies/wfd-position-paper-language-rights-deaf-children/> (Accessed on 18 September 2017).

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