

The Case for Sign Bilingualism in Irish Deaf Education

Noel O'Connell, Trinity College Dublin

Abstract

Sign bilingual education, for the purpose of this article, is defined as a program at primary or secondary school where sign language is used as the first language of instruction with spoken/written language (e.g. English) as the second language (Knoors et al., 2014). International research on sign bilingual education has been on the rise over the last twenty years to the extent that researchers can no longer ignore its importance in an Irish context. The aim of this article is to establish whether or not a case should be made for sign bilingual education in Ireland. Based on a review of international literature, the article begins by discussing the historical development of sign bilingualism. It then discusses each of the key objectives for such a programme outlined in Marschark et al. (2014): (1) the promotion of first (sign) language acquisition to support literacy and numeracy skills in the second (spoken) language; (2) to use an accessible, visual language as a way to unlock the curriculum for deaf students; (3) to improve proficiency in the written and spoken language of the majority population; (4) to enhance deaf children's social, emotional and positive identity development and their academic achievement. The study concludes with the argument that, although empirical evidence is limited, there are sufficient grounds for promoting a debate on sign bilingual education at policy level in Ireland.

Key words: sign bilingualism, deaf education, deaf communities, sign language, deaf children

Introduction

Irish Sign Language is officially recognised in Ireland through the legislative enactment of the Irish Sign Language Act 2017. While Irish Sign Language is not granted the status of an "official" language of Ireland alongside Irish and English in the constitution, the Act recognises it as the indigenous language of the Irish deaf community (Conama, 2019; O'Connell 2021). One of the key functions of the Act is to provide rights to access information and public services through the medium of Irish Sign Language. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations Organization, 2006), ratified by the Irish Government on 8th March 2018, strengthens this emphasis on the rights of deaf people to access education through the medium of sign language. For example, UNCRPD Article 24 states that "States Parties shall take appropriate

measures to facilitate the learning of sign language and the promotion of the linguistic identity of the Deaf community”; UNCRPD Article 2 stipulates that all languages should include signed languages while Article 21 emphasises the importance of recognising and promoting the use of sign languages (Pabsch, 2017). The National Council for Special Education advocates for the development of bilingualism for deaf children in Ireland but lacks the follow through on its implementation (NCSE, 2012). There is no evidence that a fully articulated language policy has been in place that clearly enforces the provision of a vibrant sign bilingual programme in which Irish Sign Language is used as language of instruction (L1) and English is adopted as the second language (L2) particularly at primary education level.

This study is concerned with sign bilingualism, the belief that sign language should be available as a first language to “support deaf children’s acquisition of a written/spoken language, especially with regard to literacy” (Marschark et al., 2014, p. ix). Sign bilinguals are those who possess ability to use two languages, one of which is a sign language and the other a spoken/written language¹ (Swanwick & Gregory, 2007). Sign bilingual education refers to the use of sign language in education especially with regard to the implementation of bilingual policy, practice and pedagogy (Swanwick, 2010). The primary aim of this study is to present a case for sign bilingual education and illustrate why it should be made available in Ireland as a human rights issue. It is not intended to propose a specific policy for sign bilingual education in the two distinct learning environments but rather to stimulate debate on

¹ Spoken/written language is referred to here as language that is used through the mode of speech and writing. It is very different in form and function from signed language. Sign language cannot be spoken and has no written form. Examples of spoken/written languages include English or Spanish. Such languages are used by the majority population in English-speaking and Spanish-speaking countries. Signed language, on the other hand, is a minority language used by deaf communities. It is a manual-visual language communicated through the use of hands, fingers and the rest of the body. National sign languages are different from one another: for example, French Sign Language (*Langue des signes française*, LSF) is different from Spanish Sign Language (*Lengua de Signos Española*, LSE).

deaf education in Ireland in order to bring it in line with current international research on sign bilingualism.

This article sets out to examine early developments in sign bilingualism in deaf education, the objectives of sign bilingual education, the criteria for meeting these objectives, the various challenges that are likely to emerge, and suggestions for what needs to be done to overcome them. Given that no research into sign bilingualism has been undertaken in Ireland it is necessary to draw on international literature in order to define the situation present in Ireland and to inform current practice in deaf education. Two diverse contexts exist in Ireland in which deaf students can learn through the medium of Irish Sign Language: the first relates to the availability of schools for deaf children (thereafter “deaf schools”) and the second concerns mainstream school placement (O’Connell & Deegan, 2014). It is anticipated that different characteristics and challenges to sign bilingual education will emerge from these two learning environments. The purpose of this article is to create space for increased dialogue on the subject and to encourage researchers to conduct further research into this neglected area of study in an Irish context.

Early Developments of Sign Bilingual Education

The origin of sign bilingual education is directly linked to historical developments related to Sweden’s official policies on deaf education in the late 1970s and early 1980s (Marschark et al., 2014). The move towards sign bilingualism had its roots in the extensive linguistic research on Swedish Sign Language conducted at Stockholm University during the 1970s, which sought to promote the role and status of Swedish Sign Language and deaf culture in schools for deaf children particularly in relation to literacy development (Svartholm, 2010). Researchers and parents of deaf children recognised that Swedish literacy skills among deaf school-leavers were below age-appropriate levels and the education system

was not adequate in providing deaf children with a level of bilingualism required to fully participate in society (Swanwick, 2010). In 1981, the Swedish Parliament passed a bill that gave legitimacy to the use of both Swedish Sign Language and Swedish in deaf education (Svartholm, 2010). A new Swedish National Curriculum was published in 1983 to provide deaf children with “the opportunity to attain bilingualism in Swedish sign language... and Swedish, mainly in its written form” (Svartholm, 2010, p. 160). The curriculum emphasized an early immersion program in which all instruction, including literacy, was to be provided in Swedish Sign Language (L1, the first language) and Swedish (L2, the second language). The aim was to establish a firm base in Swedish Sign Language during pre-school age and thereafter learn written Swedish (Knoors et al., 2014). Reports on the improved literacy outcomes among deaf children in Sweden, when set against negative outcomes based on the monolingual approach, became the main motivating force behind the move to sign bilingualism in other countries, particularly the United Kingdom (Swanwick, 2010; Knoors et al., 2014).

Margaret Pickersgill was the first to put forward a recommendation for a sign bilingualism on the basis of research on British Sign Language conducted at higher education institutions in Bristol and Durham which endorsed the linguistic nature of the language and promoted its role in deaf education (Swanwick, 2016). Pickersgill and Gregory (1998) subsequently published the “Sign bilingualism – a model” policy document which proposed sign bilingualism as the ideal approach to the education of deaf children using British Sign Language and English. Pickersgill and Gregory were responding to concerns about oralism which had not succeeded in bringing deaf children up to age-appropriate literacy level. Oralism refers to a set of ideas, beliefs and practices that serve to confer superior status to spoken language and inferior status to sign language (Anglin-Jaffe, 2015). This ideology promotes the monolingual spoken language approach to educating deaf education and the

prohibition of sign language in the classroom (Marschark et al., 2014). The result has had far-reaching consequences in causing language deprivation among deaf children during their formative years. This has been demonstrated by Conrad's (1979) study which shows that deaf students aged between fifteen and sixteen attained a literacy level similar to hearing children almost half their age. Despite undertaking intensive speech training in school, deaf students had poor speech intelligibility and their lip-reading skills were no better than those of hearing children (Swanwick, 2010). Similar results were reported elsewhere including Ireland. James, O'Neill and Smyth (1991) reported that 80% of deaf children aged 16 years had functional literacy equivalent of nine year old hearing children in Ireland. In fact, this level of underachievement continues right through secondary school thereby reducing opportunities for higher education courses and meaningful employment (Mathews & O'Donnell, 2020). Given these worldwide concerns, it is easy to see why sign bilingualism was established in other countries such as the United States, Australia, the Netherlands, Spain, Brazil and, more recently, China, Hong Kong, Taiwan, Japan, and Vietnam (Knoors et al, 2014). Despite these international developments, sign bilingualism remains nothing more than a debated topic echoed in national policy documents in Ireland.

Objectives of sign bilingual education

According to Marschark et al. (2014), discussions about sign bilingual education centers around four main objectives: first, to promote first language acquisition and learning through the provision of the accessible first language; second, to use an accessible, visual language as a way to unlock the curriculum for deaf students; third, to improve proficiency in written and spoken language; fourth, to develop deaf student's social, emotional and positive identity and improve their academic achievement.

Natural First Language Acquisition

One of the main tenets of sign bilingual education is the promotion of sign language as the *first* language of deaf children followed by literacy in a second language—the spoken and written language of the majority population (Baker, 2011). Plaza-Pust (2016) maintains that access to sign language as a first language (L1) must occur as early as possible before a second language can be acquired. The author explains the possible reasons to justify this objective. One reason is that sign language is more accessible than spoken language which is why deaf people “are naturally predisposed to visual communication, as this mode is compatible with the way they perceive the world” (Koutsoubou et al. 2017, p. 128). The other reason is that focus on spoken language as a first language even with the support of cochlear implants has not yielded improved literacy outcomes in many deaf children (Dammeyer, 2018).

Language accessibility needs to be understood in the context of modality. For example, while Irish Sign Language is considered the first and preferred language of the Irish deaf population, English is the language of the majority population (Leeson & Saaed, 2012). English is communicated through the mode of speech and writing whereas Irish Sign Language is a manual-visual language expressed through the use of the hands, body movements, facial expression and finger-spelling (Leonard & Conama, 2020). Irish Sign Language is signed rather than spoken and seen rather than heard and, unlike English, has no written form. For many deaf people in Ireland, Irish Sign Language is more accessible than English because its modality allows them to use their visual abilities rather than auditory abilities which they have very limited use. An increase in sign linguistic studies emerging in the last thirty have given credibility to Irish Sign Language as a fully functional natural human language (Leeson & Saaed, 2012). These studies confirm that Irish Sign Language

can perform the same range functions as English and other spoken languages and can be used to discuss a range of simple, concrete and abstract concepts (Leonard & Conama, 2020).

Indeed, the all-important decision about the deaf child's first language rests with the parents. Choosing a first language for their child is a crucial decision for parents to make because it touches on the question of *access*. Which language is accessible to the deaf child? Although language development is a lifelong process for deaf children, the starting point is not the school, but the family home. Statistics show that over 90% of deaf children are born to hearing parents and live in homes where only spoken language is in use at the time of birth (Mitchell & Karchmer, 2004). This situation results in a mismatch between the deaf child's dependence on visual perception and the auditory environment of the family home (Marschark et al., 2014). Thus, to ensure the child has access to an accessible language, hearing parents need to be fluent in sign language but most of them generally do not have this skill. If parents refuse to learn sign language and persist with spoken language, the inevitable outcome is language deprivation for the deaf child (Koutsoubou et al., 2017). By contrast, deaf children of deaf parents have early exposure to sign language and access to information about the social world. By the time they start school, they would have achieved the first objective of sign bilingual education—mastery of a first language, access to an accessible language, early development in literacy and subject matter knowledge. According to Janjua, Woll and Kyle (2002), deaf children of deaf parents tend to have a mastery in sign language as first language which supports the learning of English as the second language at age-appropriate developmental stages. By contrast, deaf children of hearing parents do not have opportunities to acquire a natural sign language until they meet other deaf children in school.

It is now increasingly common to find that deaf children's first language is not the same as the primary language of mainstream schools. According to Marschark and Spencer (2009), approximately three quarters of the 2,000 school-going deaf children have been

placed in mainstream schools in Ireland. In such an environment, deaf children are exposed to English as their second language (L2) and denied access to Irish Sign Language as a first language (L1). Mainstream schools in Ireland are predominantly English-medium schools in which English is the language of instruction in primary and secondary education. This language policy contradicts the first objective of sign bilingual education programmes which are specifically aimed at deaf children with sign language as a first language and the learning of English as a second language mainly in written skills. Although the language policy in deaf schools is basically bilingual with Irish Sign Language-medium classes available in secondary education, there is an underlying idea that deaf children should be given the opportunity to acquire English as first language during pre-school and at primary education level (NCSE, 2012). Given that deaf teachers are employed in such schools, there is an increased emphasis on Irish Sign Language-medium instruction in some classes and it is possible for Irish Sign Language to be a primary language of communication in most parts of the school. It is important to emphasise here that language policy in deaf schools is markedly different compared to mainstream school.

An Accessible Language for Unlocking the Curriculum

Johnson et al. (1989) argue that sign language offers “the best vehicle for providing access to socio-cultural information during early childhood and to the curricular content of education at all ages” (p. 15). Sign language as a language of instruction has had the expected outcome of raising the standard of education and, even if modestly, the literacy levels among the deaf pupils involved in sign bilingual education (Plaza-Pust, 2016). Research shows that sign bilingual education programmes work better than English-only, spoken language-only programs. The achievement difference has been attributed to the acquisition of sign language as first language and language of instruction. Marscharck et al. (2014) argue that no evidence

exists showing sign language use to be detrimental to the development of literacy and speech production. Evidence shows that many deaf children around the world become fully bilingual and bicultural without experiencing interference from one language in the learning of the second language (Marscharck, et al., 2014). Research findings show that one of the best predictors of second language proficiency in deaf students is proficiency in sign language. Sign language use and development have psychological and educational benefits in addition to serving as a pedagogical tool for providing access to academic content, allowing for increased social interaction and providing greater access to knowledge and incidental learning content. It also increases deaf children's openness to learning because it makes academic content accessible. Deaf children's learning can also be enhanced by integrating sign language into the curriculum.

Improved Proficiency in Written and Spoken Language

One of the underlying goals of sign bilingual education is the improved linguistic proficiency in written and spoken language for deaf children. This rationale has been discussed in a number of studies which raise the question as to whether or not knowledge of sign language (L1) can be transferred to and facilitate the development of literacy in the second language (L2) (Cummins, 2009). The question of what is being transferred—a question that often arouses debate about the relationship between sign language and the development of literacy—needs to be asked. Researchers such as Mayer (2009) and Mayer and Leigh (2010) argue that empirical evidence showing improved language and literacy outcomes based on this relationship is sparse and that studies on sign bilingual education particularly in relation to bilingual programs, classroom practices and teaching strategies have tended to be descriptive rather than evidence-based. The core issue to their argument is that advances in amplification technology such as cochlear implants now increases opportunities for deaf children to acquire spoken language as a first language and develop phonologic processes in literacy development.

This point is also supported in Knoors, Tang and Marshack (2014) who report that deaf students with cochlear implants experience many advantages in reading and academic attainments. Without clear evidence to support this claim, it is not clear what these advantages are and whether they relate to improved written and spoken language skills.

The results of Dammeyer's (2014) study contradicts the claim that cochlear implants improve deaf students' literacy abilities. Dammeyer's research demonstrates that significant delay in literacy skills is a reality for deaf children using cochlear implants or hearing aids. Evidence shows that this is due to the fact that spoken language as first language is inaccessible to many deaf children and results in them being deprived of opportunities to develop language skills (Swanwick, 2010). Sign language offers better access and is an important cognitive and linguistic foundation for the development of literacy skills among deaf students (Strong & Prinz, 1997; Mayberry et al., 2011). There is considerable evidence that learning through the native sign language has many advantages for literacy development in a second language for deaf students (Tang, 2017). Menéndez's (2010) research findings contradicts those reported in Mayer (2009) and Mayer and Leigh (2010). Menéndez (2010), for example, presents evidence that linguistic transfer between sign language and second language literacy at a morphosyntactic (words and sentences and their rules of formation) level is possible. Menéndez's study investigated this transfer by looking at cross-modal language contact categories found in the written productions of 15 deaf students in a bilingual secondary school in Barcelona (Spain). The results show the utility of Catalan Sign Language in second language acquisition (Spanish) and literacy development (Menéndez, 2010). Such evidence points to the important role of sign language as a first language of instruction and in the acquisition of spoken language including reading and writing skills (Tang et al., 2014; Swanwick, 2016).

What seemed reasonable in theory is that focusing on deaf children's native sign language development should ultimately result in positive cognitive and academic outcomes

has been highlighted in research. At the same time, evidence has not proved “conclusive” that sign bilingual education results in deaf children achieving age-appropriate literacy compared with hearing children of similar age (Mayer, 2009; Mayer & Leigh, 2010; Marschark et al., 2014). However, one of the methodological problems in many studies is that deaf children’s L2 spoken and written language proficiency are being compared to L1 spoken and written language proficiency of hearing children. De Quadros (2015) argues that deaf children as L2 English learners cannot be assessed in their weaker language against the standard attained by hearing children in their strongest language. The outcome of such studies is that deaf children’s written and spoken language proficiency will be compared unfavourably against those of hearing children and the net result is a negative view of sign bilingual education (Swanwick, 2016). De Quadros (2015) is critical of Marschark et al. (2014) for focusing attention more on deaf children’s hearing status and the use of cochlear implants than the important facts about deaf children’s language preference. What is overlooked by Knoors, Tang and Marschark (2014) is that deaf children are learning the second language (English) in another modality and, given that they are L2 readers, they should therefore be compared to other second-language readers (De Quadros, 2015, p. 142).

Baker (2011) maintains that achieving proficiency in a second language is dependent on a number of factors: one is the level of use and length of exposure to English in family and school situations. Did the student acquire signed and spoken languages in naturalistic settings (i.e., at home) or in institutional settings (i.e., in the classroom)? Did the student acquire both languages during early childhood or was one of the two acquired later? Deaf children born to hearing parents are more likely to have early exposure to English but, as research has shown, they do not have full access to spoken language as a first language. Other factors to consider include problems that may arise due to too much emphasis being placed on reading and writing and not enough on authentic communication (e.g. spontaneous chat, conversation, discussion

etc.) in a second language. Deaf children may have low aptitude for learning a second language or lack motivation for developing the skill. Does the student demonstrate basic or low-level abilities in second language learning? When researchers evaluate the merit of sign bilingual education, they will need to consider the fact that many hearing teachers lack the required knowledge and skills in sign language to effectively teach deaf children (Swanwick & Gregory, 2007; Tang, 2017). Teachers need to be proficient in sign language (L2 in the case of hearing teachers) to teach deaf children literacy and ensure the right conditions are in place for the success of sign bilingual education.

Enhancing Deaf Children's Social Identity Development

When appropriate conditions are in place (e.g. the deaf child has early access to sign language as a first language in the family and school), sign bilingual education and sign language-medium instruction in academic content areas give deaf students the best hope for building a solid foundation in social identity and cognitive development and support the growth of their self-esteem. Deaf culture is a defining feature of a deaf person's identity; the shared values, customs and histories characteristic of deaf culture have a very strong influence on how deaf people view the social world (Padden & Humphries, 2005). Sign language is intrinsic to the expression of deaf culture and a fundamental aspect of deaf identity (Storbeck, 2000). It is crucial that deaf children feel their linguistic identity is acknowledged in a positive light at home and in school. However, if schools do not implement sign bilingual curricula, deaf students will lose the chance to be educated. This is particularly relevant to mainstream schools as these schools are structured in ways that make it a particular challenge to develop sign bilingual education. In such environments, the deaf child has little chance of participating in classroom discussions and social interactions.

Tang (2017) reports that in some countries sign language has been made available to deaf children in mainstream settings through a co-enrolment system. Co-enrolment, by definition, involves “team teaching” where a mainstream school teacher works alongside a teacher of the deaf fluent in sign language in the same classroom. A central characteristic of co-enrolment is that class instruction is given in English and sign language. The purpose of co-enrolment, according to Tang (2017), is not only to offer equal access to curriculum for deaf and hearing students but also to have the desired outcome whereby deaf and hearing teachers and students appreciate the culture of both groups of people and sign language and English are placed on an equal footing. The availability of deaf teachers should provide deaf children access to positive role models for language development, and offer them full access to deaf culture and opportunities to find a sense of community belonging. The co-enrolment system is said to increase the possibility for sign bilingual education to take place in mainstream school. It is also considered the leading educational enterprise in the field of deaf education which requires considerable adjustment and relationship building between the two teachers. The curriculum is innovative, bilingual and bicultural, allowing possibilities to blend multiculturalism with multilingualism.

Criteria for Successful Implementation

To meet the stated objectives of sign bilingual education, Irish Sign Language needs to have the official support of parents and school leaders and be fully integrated into the school curriculum as a language of instruction and subject of study. As Swanwick and Gregory (2007) underscore, to effectively teach deaf children all aspects of primary and secondary curriculum, teachers are expected to be fluent in sign language. However, as Komesaroff (2013) notes, most teachers of the deaf are hearing people and some of them are non-committed to learning sign language. Research shows that hearing teachers generally have difficulty learning sign

language, but when they do learn it, they often do not reach the level of fluency required to teach deaf children (Plaza-Pust, 2016). This calls for an emphasis on developing hearing teachers' sign language skills at teacher training and continuing professional development courses (Swanwick, 2010). The Bachelor of Education degree course being offered at Dublin City University (DCU) should go some way towards preparing primary teachers of the deaf for teaching through the medium of Irish Sign Language. Sign language classes need to be established in the school with a strong commitment from the government in terms of funding these courses (Komesaroff, 2013).

The employment of qualified deaf teachers should be one of the most important lines of action in the provision of sign bilingual education, which need to be pursued especially in mainstream school settings (Pickersgill & Gregory, 1998; Swanwick & Gregory, 2007). The DCU teacher training course will likely increase the number of qualified deaf teachers. Through the school's facilitation of a co-enrolment approach, qualified deaf teachers can act as both content teachers and sign language teachers (Tang, 2017). Techniques for successful team teaching among deaf and hearing teachers are therefore required to ensure smooth transition on this front. This will require co-ordinated efforts from the school including those of teachers, parents and deaf adults.

According to Swanwick (2010), the head teacher and school leadership needs to see it as a priority for deaf children to acquire sign language as their first language. In Ireland, the NCSE will need to provide guidelines for the schools that allow deaf children to acquire Irish Sign Language as their first language. Such guidelines should show how school curriculum could be modified to allow deaf students access to visual materials with learning material available in English and Irish Sign Language. Irish Sign Language should be used to explain and discuss grammar and features of English or Irish in the case of Irish-language schools. In this way, English or Irish will be brought into use at developmental stages using story books.

As deaf children grow more proficient in Irish Sign Language and English/Irish, they learn subjects using more contextualized language (e.g., math and science) in classes taught in their primary language. Including Irish Sign Language as subject matter of study from primary to secondary level education can help reduce negative attitude towards sign language and increase its acceptance among hearing teachers and students. Swanwick and Gregory (2007) note that access to the curriculum through spoken language could be accompanied by focused sign language support (e.g. for background or contextual knowledge). The authors suggest that signed supported English (SSE)—the use of signs that follow English grammatical structure—could play a key role in terms of support for English language delivery and curriculum terminology. However, it cannot be expected to be the main form of curriculum delivery because it is not a natural language and its use does not make deaf children sign bilingual.

Early intervention services will play a crucial role in the beginning stage of deaf children's sign bilingual journey (Swanwick, 2010). Early intervention is often geared towards cochlear implantation and developing speech and listening skills both of which are focused on early acquisition of spoken language (Swanwick & Gregory, 2007). How parents respond to these professionals promoting the spoken language route will be crucial. Early intervention begins from the point of diagnosis followed by appointments with audiologists, speech and language therapists and cochlear implant specialists during which parents are discouraged from learning sign language. If the child is given a cochlear implant and there is a focus on developing speech and listening skills, parents are likely to be steered away from opportunities for sign bilingual education. Deaf children of hearing parents attending mainstream school will likely have no access to sign language from the time of birth to the end of their schooling (Woll & Kyle, 1989). In that context, access to sign bilingual education is denied. Sign bilingual education can only be effective when the appropriate conditions are in place to allow early access to sign language beginning from birth to the end of secondary school. This will only be

possible if there is full commitment from parents and teachers towards meeting the stated objectives of sign bilingual education outlined in this article.

Conclusion

This article argues that sign bilingual education needs to be given a fair chance to succeed in Ireland. A key issue that needs to be addressed is the relationship between sign language and literacy in the second language (Cummins, 2009). Unfortunately, empirical evidence showing improved language and literacy outcomes of this relationship is sparse and studies on sign bilingual education have been more theoretical and descriptive than evidence-based (Mayer & Leigh, 2010). In Ireland, there is a need for research into literacy and educational outcomes in sign bilingual education settings to be compared to results derived from studies on spoken language monolingualism. In that context, appropriate methodologies need to be applied where deaf children's language proficiency is compared with second language learners rather than first language users. Policymakers will need to consult the wide range of literature on sign bilingual education published in *International Journal of Bilingual Education and Bilingualism* (e.g. Koutsoubou, et al., 2007; McKee, 2008; Cummins, 2009; Grosjean, 2010; Menéndez, 2010; Krausneker, et al., 2020) and inject them into national special education policy and school-based practices. Finally, this paper has not been intended to propose a specific policy document but to increase opportunities for further research into sign bilingual education in Ireland.

Acknowledgements: The author wishes to thank the editors and anonymous reviewers for their constructive feedback.

References

- Anglin-Jaffe, H. (2015). De-colonizing deaf education: An analysis of the claims and implications of the application of post-colonial theory to deaf education. In K. Lesnik-Oberstein (Ed.), *Rethinking disability theory and practice* (pp.76-97). Palgrave Macmillan. https://doi.org/10.1057/9781137456977_6
- Baker, C. (2011). *Foundations of bilingual education and bilingualism*. Multilingual Matters.
- Conama, J. B. (2019). “Ah, that’s not necessary, you can read English instead”: An ecological analysis of state language policy concerning Irish sign language, Irish and English and its effects. In M. de Meulder, J. Murray, and R. McKee (Eds.), *Recognizing sign languages: An international overview of national campaigns for Sign Language legislation and their outcomes* (pp.19-35). Multilingual Matters.
- Conrad, R. (1979). *The deaf-school-child: Language and cognitive function*. Harper and Row.
- Cummins, J. (2009). Pedagogies of choice: Challenging coercive relations of power in classrooms and communities. *International Journal of Bilingual Education and Bilingualism*, 12(3), 261-271. <http://doi.org/10.1080/13670050903003751>
- Dammeyer, J. (2014). Literacy skills among deaf and hard of hearing students and students with cochlear implants in bilingual/bicultural education. *Deafness & Education International*, 16(2), 108-119.
- Gregory, S. (2004). Issues in sign bilingual education. In S. Bradaric-Joncic & V. Ivasovic (Eds.), *Sign language, deaf culture & bilingual education* (pp. 111-121). Faculty of Education and Rehabilitation Sciences.
- Grosjean, F. (2010). Bilingualism, biculturalism, and deafness. *International Journal of Bilingual Education and Bilingualism*, 13(2), 133-145. <http://doi.org/10.1080/13670050903474051>

- James, T., O'Neill, E., & Smyth, J. (1991). Reading achievements of children with hearing impairments. *Link*, 4-6.
- Johnson, R. E., Liddle, S. C., & Erting, C. J. (1989). *Unlocking the curriculum: Principles for achieving access in deaf education*. Gallaudet Research Institute, Gallaudet University. <https://files.eric.ed.gov/fulltext/ED316978.pdf>
- Janjua, F., Woll, B., & Kyle, J. (2002). Effects of parental style of interaction on language development in very young severe and profound deaf children. *International Journal of Pediatric Otorhinolaryngology*, 64, 193-205.
- Knoors, H., Tang, G., & Marschark, M. (2014). Bilingualism and bilingual deaf education: Time to take stock. In M. Marschark, G. Tang, & H. Knoors (Eds.), *Bilingualism and bilingual deaf education* (pp.1-20). Oxford University Press.
- Koutsoubou, M., Herman, R., & Woll, B. (2007). Does language input matter in bilingual writing? Translation versus direct composition in deaf school students' written stories. *International Journal of Bilingual Education and Bilingualism*, 10(2), 127-151. <http://doi.org/10.2167/beb391.0>
- Krausneker, V., Becker, C., Audeoud, M., & Tarcsiová, D. (2020). Bilingual school education with spoken and signed languages in Europe. *International Journal of Bilingual Education and Bilingualism*. <http://doi.org/10.1080/13670050.2020.1799325>.
- Marschark, M., Tang, G., & Knoors, H. (2014). *Bilingualism and bilingual deaf education*. Oxford University Press.
- Mathews, E. S. & O'Donnell, M. (2020). Phonological decoding and reading comprehension in deaf and hard-of-hearing children. *European Journal of Special Needs Education* 35(2), 220-235. <http://doi.org/10.1080/08856257.2019.1646954>
- Mayer, C. (2009). Issues in second language literacy education with learners who are deaf. *International Journal of Bilingual Education and Bilingualism*, 12(3), 325-334

- Mayer, C., & Leigh, G. (2010). The changing context for sign bilingual education programs: Issues in language and the development of literacy. *International Journal of Bilingual Education and Bilingualism*, 13(2), 175-186. <http://doi.org/10.1080/13670050903474085>
- Mitchell, R. E. & Karchmer, M. (2004). Chasing the mythical ten percent: Parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies*, 4(2), 138-163.
- Leeson, L., & Saaed, J. I. (2012). *Irish sign language: A cognitive account*. University of Edinburgh Press.
- LeMaster, B. (2002). What difference does difference make? Negotiating gender and generation in Irish sign language. In S. Benor, M. Rose, D. Sharma, J. Sweetland & Q. Zhang (Eds.), *Gendered practices in language* (pp. 309-338). CSLI Publications.
- Leonard, C. & Conama, J. B. (2020). In search of ISL's pre-history: The complex origins of Irish sign language(s?). *TEANGA, the Journal of the Irish Association of Applied Linguistics*, 11, 1-17.
- McKee, R. (2008). The construction of deaf children as marginal bilinguals in the mainstream. *International Journal of Bilingual Education and Bilingualism*, 11(5), 519-540. <http://doi.org/10.1080/13670050802149168>
- Menéndez, B. (2010). Cross-modal bilingualism: Language contact as evidence of linguistic transfer in sign bilingual education. *International Journal of Bilingual Education and Bilingualism*, 13(2), 201-223. <http://doi.org/10.1080/13670050903474101>
- O'Connell, N. P., & Deegan, J. (2014). 'Behind the teacher's back': An ethnographic study of deaf people's schooling experiences in the Republic of Ireland. *Irish Educational Studies*, 33(3), 229-247.
- O'Connell, N. (2021). Deaf activism and the Irish sign language movement, 1980-2017.

- Sign Language Studies*, 21(3), 263-289. <https://muse.jhu.edu/article/790327>
- Pabsch, A. (2017). Sign language legislation as a tool for sustainability. *American Annals of the Deaf*, 162(4), 365-376.
- Plaza Pust, C. (2016). Bilingualism and deafness: On language contact in the bilingual acquisition of sign language and written language. De Gruyter Mouton. <https://doi.org/10.1515/9781501504990>
- Sheridan, S. (2009). Translating idiomatic expressions from English to Irish sign language (ISL): Theory and practice. *The Sign Language Translator and Interpreter*, 3(1), 69-83.
- Storbeck, C. (2000). Bilingual education for the deaf in South Africa - Can it work? *The South African Journal of Communication Disorders*, 47, 51-59. https://journals.co.za/doi/pdf/10.10520/AJA03798046_423
- Strong, M., & Prinz, P.M. (1997). A study of the relationship between American sign language and English literacy. *Journal of Deaf Studies and Deaf Education*, 2(1), 37-46.
- Svartholm, K. (2010). Bilingual education for deaf children in Sweden. *International Journal of Bilingual Education and Bilingualism*, 13(2), 159-174. <http://doi.org/10.1080/13670050903474077>
- Swanwick, R., & Gregory, S. (2007). *Sign bilingual education: Policy and practice*. Douglas McLean.
- Swanwick, R. (2010). Policy and practice in sign bilingual education: Development, challenges and directions. *International Journal of Bilingual Education and Bilingualism*, 13(2), 147-158. <http://doi.org/10.1080/13670050903474069>
- Swanwick, R. (2016). Deaf children's bimodal bilingualism and education. *Language Teaching*, 49(1), 1-34. <http://doi.org/10.1017/S0261444815000348>.

- Tang, G. (2017). Sign bilingualism in deaf education from deaf schools to regular school settings. In O. García, A. Lin, & S. May (Eds.), *Bilingual and multilingual education, encyclopedia of language and education* (pp.191-203). Springer International Publishing. http://doi.org/10.1007/978-3-319-02258-1_35
- Woll B., & Kyle J.G. (1989). Communication and language development in children of deaf parents. In S. von Tetzchner, L. S. Siegel, & L. Smith (Eds.), *The social and cognitive aspects of normal and atypical language development* (pp.129-145). Springer. https://doi.org/10.1007/978-1-4612-3580-4_7