

BRIEFING NOTE:

IMMIGRANT DEAF MULTILINGUAL LEARNERS IN EU SCHOOLS

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Key points:

1. Deaf and hard of hearing (DHH) children and adolescents are a small but important and heterogeneous group of immigrants to the EU. They may face particular challenges with learning the language(s) of the country they settle in.
2. Like other immigrant students, DHH immigrants need to learn a new societal spoken/written language and potentially also the societal sign language. However, they might not have had the opportunity to develop strong skills in a first language (whether the language spoken their family at home, or a sign language), and they might not yet be literate. This means that language learning is likely to be more challenging for them compared to hearing immigrant peers.
3. Educators and policy makers need to have a greater awareness of the language-learning needs of these students, in order to support them more effectively in school.

Recommendations:

1. Teachers should compile a detailed language history of the student, involving the student and family members. For example, what languages (spoken, signed, written) has the student learnt in the home, at school, and in their previous country(ies), and what hearing devices do they use?
2. School leaders should ensure the provision of deaf awareness training for all staff and students.
3. Teachers should work with parents and with a multi-disciplinary team in order to share expertise and support the student's needs.

The context

In 2022 (the latest year for which figures are available), 7 million people (including refugees, asylum seekers and unaccompanied minors) immigrated to the European Union (European Commission, 2024a), nearly 1 million of whom were below 15 years of age (Eurostat, 2024). Political developments since the 1990s mean that the diversity of countries that children and adolescents come from is increasing. Schools face challenges in catering for the great linguistic diversity that immigration brings, because for many students the language of their school is not the same as the language(s) they are using at home.

Within the population of immigrant students, this briefing note presents the language-learning challenges for one particular group of learners – those who are deaf and hard of hearing (DHH). As well as the common challenges faced by all immigrant students who are having to learn a new language, DHH learners face additional challenges related to their deafness and to consequent difficulties in learning their home language(s). This briefing note sets out what these challenges are and how they are likely to affect learners, and it is written for educators and policy makers with little knowledge or professional experience of DHH learners. Our aim is to raise awareness of these learners' needs, with the ultimate goal of improving the support that they receive in schools.

The briefing note is structured as follows. We first present some basic relevant facts about deafness and hearing loss, and we explain how they affect language and literacy learning, and cognitive development and learning more broadly. With this background information as a foundation, we then focus specifically on immigrant DHH students and the challenges they face in schools. We finish by presenting some case studies of immigrant DHH students and their language learning experiences.

Some facts about deafness and hearing loss

Globally, approximately 3.5 per 1,000 children and adolescents are DHH, although the prevalence rate varies from region to region: it is higher in less economically developed countries (Guo et al., 2024) and higher in countries and communities where consanguineous marriages are common (Neumann et al., 2020). A number of factors can cause permanent deafness and hearing loss, including genetic factors, intrauterine infections (such as rubella), oxygen deprivation during birth, and – in childhood – infections (such as meningitis) and accidents (WHO, 2021). Otitis media, an infection of the middle ear, is a leading cause of temporary hearing loss in children (WHO, 2021). Deafness and hearing loss might occur in conjunction with other disabilities, for example learning disabilities, vision impairment, and Down Syndrome. However, being DHH is not by itself a learning disability, although it may have consequences for cognitive development and learning (as we explore in this briefing note).

The availability of newborn hearing screening in many countries means that congenital deafness (i.e., deafness that is present at birth) can be detected in the first few months of life, enabling

early access to hearing devices [see **Box 1**] and intervention programs, which in turn leads to better outcomes for children. Such screening achieves excellent coverage (>85% of all babies) in most EU countries but has lower coverage in less economically developed regions of the world (Neumann et al., 2020).

Box 1. Hearing technology devices for DHH children and adolescents. Note that these devices aim to provide the wearer with greater access to sound, but they do not 'cure' deafness and they do not work well for all individuals.



Hearing aids may be used by individuals with mild to severe hearing loss [see **Box 2**]. They sit behind or in the outer ear. They work by amplifying sounds (both speech and non-speech sounds).

Cochlear implants may be used by individuals with severe to profound hearing loss [see **Box 2**] who have permanent damage to the cochlea (part of the inner ear). They are implanted by surgery. They work by converting sound to electrical signals which stimulate the auditory nerve.

Box 2. Levels of hearing loss (WHO, 2021) and how they affect the hearing experience		
Level of hearing loss	Hearing threshold in the better hearing ear in decibels (dB)	Likely hearing experience in a noisy environment, e.g., the classroom
Mild	20 to <35 dB	May have difficulty hearing conversational speech
Moderate	35 to <50 dB	Difficulty hearing speech and taking part in conversation
Moderately severe	50 to <65 dB	Difficulty hearing most speech and taking part in conversation
Severe	65 to <80 dB	Extreme difficulty hearing speech and taking part in conversation
Profound	80 to <95 dB	Unable to hear conversational speech

The language and literacy learning experiences of DHH children

The degree of hearing loss will affect how much spoken language DHH individuals are able to hear [see **Box 2**]. Even so-called 'mild' hearing loss and unilateral hearing loss (i.e., where just one ear is affected) can cause difficulties hearing speech when there is a lot of ambient noise (which is frequently the case in classrooms!). The language and speech outcomes of DHH children and adolescents are affected by the age at which intervention (i.e., the provision of hearing technology and of language and communication support) starts. Outcomes are more successful for children who are identified before six months of age (hence the importance of universal newborn hearing screening) and who are offered prompt intervention (Yoshinaga-Itano, 2003).

The language input to DHH children does not need to be speech: sign languages [see **Box 3**] are just as effective for communication and for supporting children's cognitive and socio-emotional development (Hall et al., 2019). However, very few children will have the opportunity to acquire a sign language at an early age: more than 90% of DHH children are born to hearing parents (Mitchell & Karchmer, 2004) who are very unlikely to know a sign language and who often have minimal understanding about the influence of deafness on their child's development. Furthermore, myths abound that learning a sign language will disrupt children's spoken/written language development, despite there being no robust evidence for this claim (Marshall, 2021). On the contrary, learning to sign supports the acquisition of spoken/written language (Zhang et al., 2024).

Box 3. Sign languages

Groups of deaf people have used sign languages throughout history. Sign languages are full, natural languages with their own grammar and vocabulary. They are articulated using not only the hands, but also the face (eyes, mouth, eyebrows), head and torso. There are over 150 sign languages in the world, and – as is the case for spoken languages – users of different sign languages don't necessarily understand one another's language. Sign languages are independent of the spoken language(s) around them. However, some make use of a manual alphabet ('finger spelling') to spell out words from the local spoken language, particularly the names of people and places.

A country may have several sign languages. For example, Nepal's national sign language, Nepalese Sign Language, likely originated several decades ago in a school for deaf students located in the capital Kathmandu. Nepal also has several sign languages which originated in village communities with a higher-than-usual incidence of deafness, including Jumla Sign Language, Jhankot Sign Language, and Ghandruk Sign Language (Ethnologue, 2024).

Given both their reduced access to speech sounds (due to their deafness) and little if any access to sign language (due to the lack of opportunity to learn it), DHH children are at risk of delayed language acquisition, a phenomenon known as 'language deprivation' (Hall, 2017). Delayed language development, in turn, can impact the development of DHH children's academic skills

and social development, and can have longer-term consequences with respect to employment and to physical and mental health outcomes. It is important to emphasize that these sequelae are not a consequence of deafness *per se*, but rather a consequence of language deprivation.

Of particular relevance to education is the finding from a large number of studies that DHH students are likely to achieve poorer reading and writing outcomes compared to their peers (Wang et al., 2021; Williams & Mayer, 2015). The challenges for DHH students include decoding words, understanding text, composing text, and spelling. Given the close relationship between spoken and written language, these challenges are not surprising. There is, however, a lot of variability in DHH students' literacy skills, related to several factors including age of diagnosis, severity of hearing loss, vocabulary knowledge, and lipreading skills (Kyle & Harris, 2010).

Cognitive development and learning in DHH children

Hearing loss can have a long-lasting impact on an individual's academic outcomes. DHH students tend to have poorer school performance, slower progression through the academic system, a greater risk of dropping out of school, and lower likelihood of applying for higher education, compared with their hearing peers (Idstad & Engdahl, 2019; Järvelin et al., 1997).

Although all students will learn some vocabulary through explicit teaching, many of their new words are learnt 'incidentally', through being overheard – or, in the case of signs, being seen – when they are used in the classroom and playground. DHH students are less likely to be able to access what other people are saying, even when they use hearing aids or cochlear implants [see **Box 1**], because of their likely reliance on visible speech (i.e., lipreading the speaker) and the narrow field of vision compared to the field of sound (i.e., if they are not looking at the speaker they will not be able to lipread them). DHH students are therefore less likely to acquire new words incidentally, and this may partly explain their lower vocabulary scores (Convertino et al., 2014). Lower vocabulary itself has an impact on language proficiency, and particularly on more formal, academic language ['Cognitive academic language proficiency', see **Box 4**].

Box 4. Different types of language proficiency

Cummins (2008) draws a conceptual distinction between two types of language proficiency relevant to language learning, and this distinction is useful when thinking about DHH students' language learning:

Basic interpersonal communicative skills (BICS): conversational fluency in a spoken or sign language, often thought of as the language of the playground. BICS is acquired relatively early and straightforwardly.

Cognitive academic language proficiency (CALP): the ability to understand and express – whether in speech, sign or written language – concepts and ideas that are relevant to success in school. CALP includes the language necessary for higher thinking skills such as classifying, evaluating, hypothesising, inferring, and generalising. CALP is acquired slowly and effortfully throughout the school years.

One important set of skills for formal classroom learning is termed 'executive functions' (EF). EF skills are the higher-order self-regulatory cognitive processes that allow individuals to modulate their attention and control their behavior in order to achieve a specific goal, such as completing a class assignment. They include resisting interference from irrelevant stimuli ('inhibition'), shifting flexibly from one mental frame of focus to another ('cognitive flexibility'), and the ability to hold and manipulate information in the mind ('working memory'). There is evidence that language development supports EF development and that EF skills tend to be weaker in DHH children who have poor language skills (Jones et al., 2020).

Also relevant to DHH students' learning in the classroom is fatigue. Some DHH students experience greater fatigue than their hearing peers as a result of the effort needed to concentrate on what the teacher and other students are saying (Bess & Hornsby, 2014).

Countries vary in how much specialist educational provision there is for DHH students, and in what proportion of them attend mainstream schools (with or without specific support in or out of the class) (European Commission, 2024b). Even in specialist schools, there might not be sufficient opportunity to learn sign language well. Educators' degree of expertise is likely to be greater in specialist schools, but even staff in specialist schools may have only limited experience of supporting immigrant DHH learners, and it is this specific population that we focus on in the next section of this briefing note.

The challenges for immigrant DHH students in schools

Despite there being no official statistics on the number of immigrant DHH learners in EU countries (Marx & Mann, 2024), it is likely that they are a small – but very heterogeneous – group. Like all DHH students, they vary in their degree of deafness, the age at which their deafness was identified, how well they have responded to hearing devices, whether they have additional learning needs, etc. There is also additional variability caused by their language learning and schooling experiences prior to immigration. They will come to their new country with diverse migration histories and with diverse experiences of schooling (and some may have had no formal education at all). While families who emigrate to a new country may have planned this transition, those who are refugees may have fled unexpectedly from their home. Immigrant DHH students who are refugees may have experienced trauma due to leaving their home and their country, and due to being separated from family members and from people who know how to communicate with them in their native sign language.

Like other immigrant students, DHH immigrants need to learn a new societal spoken/written language and maybe also the societal sign language, but they might not have even had the opportunity to master a home spoken or sign language, and/or they might not be literate in the home language. A range of different languages and communication methods might have been used at home, including various combinations of spoken language, sign language, and gesture (Duggan, 2024). Some families will choose to keep up the heritage language(s) with their deaf

child, but others will not (Bedoin, 2024). Depending on when an immigrant DHH learner enters school in their new country, support for the acquisition of proficiency in both BICS and CALP [see **Box 4**] will very likely be required (Cannon & Guardino, 2022). In order to determine how best to support the student's language-learning needs, the compilation of a comprehensive language profile, capturing the student's abilities in all the languages to which they are regularly exposed, will be essential (Pizzo & Ford, 2022).

One area of challenge for professionals is to use evidence-based practice (EBP) in their work with immigrant DHH learners and their families. EBP consists of three components: (a) use of the best-available research evidence, (b) application of professional expertise, and (c) the perspective of students and their families (Roulstone, 2011). With regards to use of the best-available evidence, there is currently little research describing the development and communication outcomes of immigrant DHH learners. In the meantime, educators are encouraged to draw on research evidence from hearing language learners and from non-immigrant DHH language learners (Scott et al., 2022).

Case studies

We finish this briefing note with a set of case studies of immigrant DHH students. Every student is an individual, but the aim of these case studies is to illustrate some of the variety of language-learning experiences of this group. Please note that all the names used in these case studies are pseudonyms.

Case study 1.

Kwame is a 10-year-old boy who has a moderate, bilateral sensorineural hearing loss and uses mostly listening and spoken language to communicate. His family immigrated from Ghana to the United Kingdom for a job opportunity at a university when Kwame was 8 years old. His first home language is Twi, a dialect of Akan (a language spoken in Ghana), although his parents are also fluent in and use English at home. In school, Kwame began learning English and British Sign Language (BSL) in a small group resource classroom with other DHH students. His teacher uses a total communication approach for instruction (i.e., BSL signs, gestures, fingerspelling, and speech to communicate with his class). One of Kwame's strengths is his ability to decode and recognize written English words, while he needs to work on his ability to understand key details in a story.

(This case study is adapted from Scott et al., 2022.)

Case study 2.

Fríða is a 6-year-old girl living in Denmark. Her family moved from Iceland to Denmark when she was 5 years old, where her mother was beginning her PhD. Fríða was born with a moderate-to-severe hearing loss which was diagnosed through newborn screening. Both her parents speak Icelandic and Fríða has been using hearing aids and learning Icelandic through speech and listening since she was 3 months old. Fríða is a curious, friendly, and caring child who enjoys active play and being read to. Fríða's Icelandic skills were a little delayed compared to other children her age when she moved to Denmark. She also spoke a little English, which she learned through watching television programs. Now in Denmark, Fríða has just started attending a mainstream school, where all the teaching is in spoken Danish. Five mornings a week she is in a special class with other students who are learning Danish as an additional language. All the other students in this class are hearing and the teachers have no experience working with a child who is DHH. Fríða cannot understand her teachers and peers talking to her. She is also refusing to wear her hearing aids at school because the classroom environment has a lot of background noise that she says hurts her head and makes her tired. Fríða likes to play outside where the play can be physical and does not involve language, but in other situations she is shy and withdrawn.

(With thanks to Kathryn Crowe for providing this case study.)

Case study 3.

Medhi is a 10-year-old profoundly deaf boy who was born in Algeria and moved to France at the age of 4. He does not have a hearing aid or cochlear implant. His parents are hearing and there are six siblings in total, four of whom are hearing and two of whom are deaf (Medhi and his older sister Hasna). Arabic is the language spoken at home, and Medhi also knows the basics of Algerian Sign Language. He attends a specialist primary school for DHH children. His spoken and written French skills are not yet strong, but he is making good progress with learning LSF (Langue des Signes Française), and it is currently his strongest language. In certain circumstances, for example when discussing his early childhood experiences in Algeria, he will incorporate signs from Algerian Sign Language into his LSF, a 'code-switching' strategy that is widely used by multilingual speakers and signers (Bullock & Toribio, 2009).

(With thanks to Diane Bedoin for providing this case study.)

Recommended reading

Cannon, J. E., Guardino, C., & Paul, P. V. (2022). *Deaf and hard of hearing multilingual learners: Foundations, strategies and resources*. Routledge.

Marx, N., Adams Lyngbäck, L., Crowe, K., & Holmström, I. (Eds.) (2025). Special issue on immigrant deaf and hard-of-hearing additional language learners. *Journal of Multilingual and Multicultural Development*, 46(2).

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Page 1: Teacher with deaf student: Amelie-Benoist/BSIP Corbis Documentary/Getty Images

Page 3: Child with hearing aid: Anna-Maria Schapp on Flickr; Child with cochlear implant: vgajic.

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