Opportunities and challenges of educating young deaf learners in 2022 in Belgium

Leo De Raeve shares insights from his keynote presentation at the 26th FEAPDA conference in Tallinn (Estonia) on 30th September 2022

Changing trends in deaf education

Flanders, the Dutch-speaking part of Belgium, was in 1998 one of the first regions in Europe to implement a universal neonatal hearing screening programme (UNHS) combined with a further diagnostic and early intervention programme. With the introduction of UNHS, hearing loss in children was identified at an earlier age, hearing aids and cochlear implants could be fitted earlier, and the brain could be stimulated earlier. For more than a decade now, > 90% of deaf children born in Flanders receive cochlear implants (bilateral=70%) and the age of implantation has also been falling steadily (De Raeve, 2016).

All this can have a positive impact on their speech perception, spoken language development, school performance, and on their social and emotional development. This has resulted in a total shift in the educational setting of deaf students *(Figure 1)*. In 1995 as a deaf student, it was exceptional to be educated in a mainstream setting. At secondary level (12–18 years), 84% of deaf students were educated in a special school for the deaf, of which 70% were in vocational training. Of those who were in a mainstream setting at that time, only 6% were following a technical or general secondary level that prepares them for university.

But 20 years later in 2015, only 10% of deaf students follow vocational training in a special school for the deaf; instead 70% are educated in a regular secondary school, of which 50% are at a technical or general level, preparing for university. All this is a huge educational shift. In special deaf education there is also an increase (from 14 to 20%) of students with multiple problems, for whom it is not possible to follow vocational training, and who are prepared to live independently.

In addition to early screening and early implantation, the growing heterogeneity of the population of deaf children is a very challenging factor. We know that 30 to 40% of deaf children are reported to have additional disabilities, but there is also an increasing number of deaf children who are raised by parents whose first language is not that of the language used in education.

Looking at the population of deaf children educated in one of the six special schools for the deaf in Flanders *(Figure 2)*, we see an increase of 20% (from 37% in 2012 to 57% in 2022) of multilingual families during the last decade. In those special schools located in big cities (Antwerp, Brussels), the percentage of multilingual families has increased to above 70%. Some of these children were born in the country where they are educated, but a growing number enter the local educational system during their school years (parents moving for employment, refugees) often with little or no communication or educational background.

It is clear that multilingualism in the family, in combination with low socioeconomic status of the parents and late onset of the intervention relate to a poor communication level (in spoken and sign language), poor school performance (especially in reading), and often more social-emotional problems, which all pose a big challenge for their Teachers of the Deaf (ToD) (Wiefferink et al., 2013).

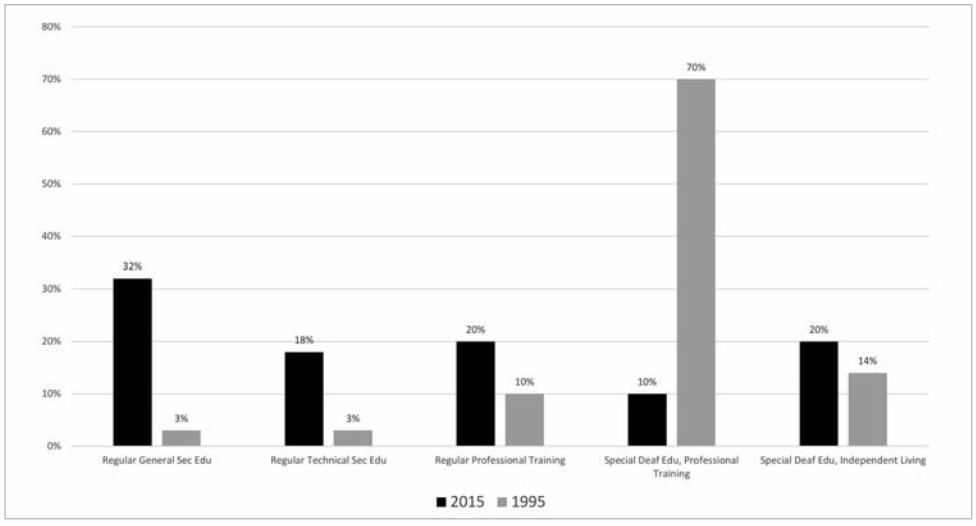

Figure 1: Educational setting of deaf students at secondary level in Flanders in 1995 and in 2015

Adapting our communication approaches to the changing population

For this heterogeneous population, there is not a one-size-fits-all approach that meets the needs of all deaf children and their families. A combination of communication approaches is used and modified over time depending on the needs of the child and his or her family (De Raeve, Baerts, Colleye & Croux, 2012).The language and communication approaches,

and strategies for young implanted deaf children can be totally different from those receiving implants at a later stage of language development, or even not receiving cochlear implants because they were too old when entering the country and the educational setting.

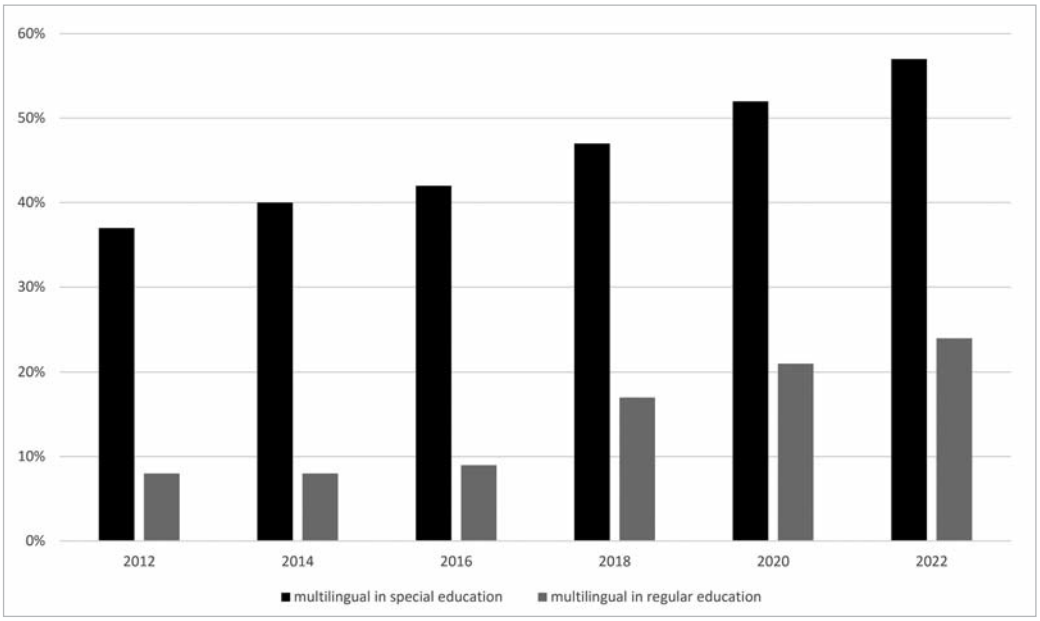

Figure 2: Multilingual families in deaf education 2012–2022

We have to recognise that the improved auditory experiences provided by cochlear implants over hearing aids have facilitated the acquisition of spoken language in a lot of deaf children. Although these children may have access to greater levels of spoken language through hearing than ever before, most of them continue to require support as learners in the classroom, which is offered in Flanders by peripatetic ToDs working for a regional mainstream support service.

Some of these children still start in a special school for the deaf but move to a mainstream setting during their early years. Looking at those who stay in special schools for the deaf, we notice an increase in the use of sign language in their educational setting by age.

Incidental learning

Incidental learning refers to unintentional learning occurring at any time and in any place, usually by overhearing conversations. In typical hearing children, 80 to 90% of their vocabulary is learned incidentally: from what parents say to each other or to the other children of the family, from what they pick up at the playground, from tablets, TV … To come to incidental learning in a spoken language environment, children need good binaural hearing skills to understand as well as possible soft speech, speech from distance, and in background noise. Incidental learning not only stimulates vocabulary, but also more complex language development (grammar, narrative skills, pragmatics) and even theory of mind (ToM) and social-emotional development (De Raeve, Vermeulen & Snik, 2015).

To enable incidental learning, deaf students should be educated in an accessible learning environment, so they are able to pick up as much information as possible from their environment. Success at capturing information in the classroom and assimilating it into learning relies not only on their speech perception skills but also on an intertwined set of language, cognitive, and social skills. These include joint attention, ToM, and executive functions such as working memory, attention span, emotional regulation, and flexibility.

Several special schools for the deaf and also mainstream support services focus more on the development of ToM and on the executive functions, by incorporating specific training programmes into the curriculum, or by organising these training courses outside the curriculum on a voluntary basis.

Learning in a classroom

There is a lot of evidence that a classroom is often a difficult listening environment (because of bad acoustics, a lot of background noise and distance from the teacher), which can be ameliorated using classroom audio distribution systems or personal assistive listening devices. Most of these devices used by deaf students are transmitting the sound through FM (frequency modulation), 2.4 GHz frequency band, infrared, Telecoil, or Bluetooth technology. In the very near future we expect a lot from Auracast™ broadcast audio, a new universal Bluetooth capability that will deliver enhanced listening experiences and audio accessibility for everyone, including those with hearing loss. In Flanders, 50% of our students are in regular education or using a personal assistive listening device. This may be combined with a speech-to-text interpreter. In schools for the deaf, they don't use personal assistive listening devices (anymore) because of the heterogeneous population, and the fact that deaf children are educated in small groups or individually.

In addition to the auditory input, teachers should provide deaf children with the visual cues they need (eye contact, lipreading, pictures, flow charts, written text, supported signs, sign language …) to help maintain attention and guide them towards information in order to provide them with full access to instruction. Teachers should recognise that some deaf students require captioning or signing all the time (De Raeve, 2015). In regular education, the Department of Education made it possible to offer this through extra interpreters, but in special education this is not possible and ToDs should have these competencies, which is often not the case.

Teacher training

The challenge for the field is to embrace the diversity of

the current population of deaf learners and to appropriately address the specific needs of each child in his/her family. As the population of deaf children has changed very rapidly in locations with access to advanced technology, and as more children attend mainstream schools, the demand for professional development opportunities and for specialised staff training increases.

Teachers also need to know how to manage these new high-tech hearing devices and they should be able to teach others how to manage them. This can be very challenging given the extensive variety in hearing and assistive listening devices. Ongoing professional development for ToDs already in the field is also vital.

All this is a big problem nowadays in Flanders, where there is no qualified training for ToDs. The training is organised by the (six) centres for deaf education themselves, but with the increasing complexity of the current population and the growing number of students in mainstream, there is demand for smaller class sizes and more teachers, resulting in less budget and staff available to organise training courses for their staff.

Many teachers now start work as peripatetic support teachers immediately upon completing their teacher training with little or no specific experience in educating or supporting deaf children. With more students in mainstream classes, more specialist staff are needed to support them in their mainstream schools, while fewer staff are required to educate the smaller but very diverse population in the special schools for the deaf. How to manage this is really a big challenge.

Conclusion

Newborn hearing screening and cochlear implantation have provided new opportunities for profoundly deaf children, have changed their educational choices and options, and as a consequence have created new challenges for ToDs. On the one hand, teachers need to increase their expectations regarding what deaf children can achieve, but on the other hand, the population is getting more diverse with increasing numbers of multilingual families.

Teachers need to be flexible and continually updated with the technology and changing expectations. They need to be able to provide auditory and visual classroom adaptations to create a fully accessible learning environment. They also need to meet the psycho-social needs of this group as they grow through adolescence. And finally, teachers need to be able to work with other professionals. All this is a big challenge for ToDs, especially in those countries and regions (like Flanders) where there is little or no specific staff training available.

For professionals working in deaf education in these countries, it should be possible to follow training courses abroad, so they also have the opportunity to develop the competences and knowledge necessary to educate and support their population of deaf children. FEAPDA, the European Federation of professionals working in deaf education, can play an important role in this.

Leo De Raeve PhD is a psychologist, Teacher of the Deaf, university lecturer, general director of ONICI, and president of FEAPDA and Cochlear Implant International Community of Action (CIICA)

References

De Raeve L, Baerts J, Colleye E & Croux E (2012). *Changing Schools for the Deaf: Updating the Educational Setting for Our Deaf Children in the 21th Century, a big Challenge*. Deafness & Education International, Vol. 14, 1, March, 2012, 48–59.

De Raeve L (2015). *Classroom adaptations for effective learning by deaf students.* In: Harry Knoors & Marc Marschark (Eds), Educating deaf learners: creating a global evidence base, Oxford University Press, Oxford-New York, 547–572.

De Raeve L, Vermeulen A & Snik A (2015). *Verbal Cognition in Deaf Children Using Cochlear Implants: Effect of Unilateral and Bilateral Stimulation*. Audiology and Neurotology, Vol. 20, 4: 261–266.

De Raeve L (2016). *Cochlear Implants in Belgium: Prevalence in Paediatric and Adult Cochlear Implantation*. European Annals of Otorhinolaryngology, Head and Neck Diseases, 1335, S57–S60.

Wiefferink C, Riffle C, Ketelaar L, De Raeve L & Frijns J (2013). *Emotion understanding in deaf children with a cochlear implant*. Journal of Deaf Studies and Deaf Education, Vol. 18, 2, 175–186.

FEAPDA

Fédération Européenne des Associations de Professeurs de Déficients Auditifs (FAEPDA)
ie the European Federation of Associations of Teachers of the Deaf is a group of Teachers of the Deaf from across Europe and includes the following countries:

- Belgium: CORA, Flamish association of audiopedagogues.
- Germany: BDH, Berufsverband Deutscher Hörgeschädigtenpedagogen (www.b-d-h.de).
- Estonia: KLÕPS, Kuulmispuudega Laste Õpetajate Selts (http://klops.edu.ee)
- Switzerland: AUDIKO Konferenz der Leitenden von Zentren fuer Hoerbeeintraechtigte und von Audiopaedagogischen Diensten (www.audiopaedagogik.ch)
- Luxembourg: Professeurs d'enseignement logopédique du Luxembourg (www.logopedie.lu).
- Macedonia
- Netherlands: Simea, Dutch association of teachers of the deaf (www.simea.nl).
- Slovenia: DD, Slowenian association of teachers of the deaf.
- United Kingdom: BATOD, British Association of Teachers of Deaf Children and Young People (www.batod.org.uk)
- Ireland: National Council for Special Education (www.ncse.ie)

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