

# Bimodal bilingual development of deaf children with a cochlear implant: a longitudinal multi-case study

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## Abstract

This paper discusses the bimodal bilingual acquisition of deaf children using a cochlear implant. The parents of the children who participated the research started to study sign language after the hearing loss of their child was diagnosed. After the children received cochlear implants the children have also started to acquire a spoken language. After the implantation, the parents have focused more on spoken language signing at home, however, they have still used sign language in certain situations and attended to a sign language project 3 to 4 times a year. This is a longitudinal study that follows the changes of the language and communication skills, and also the use of these languages in the environment of these children. This paper presents the course of development during the period of five years and answers the questions: How do the two languages of different modalities develop beside each other in children with CI? What kind of individual features are seen in the course of development during five years? What kind of factors seem to affect the development in each child?

The ages of the children during this follow-up were 7;6 – 12;6, 4;6 – 9;3, and 2;9 – 7;6. The language data for FinSL were

collected by videotaping the discussions between the child and a deaf adult native signer, and the language data for Finnish were collected by videotaping discussions between the child and a hearing adult native speaker of Finnish. The sign language data were annotated by ELAN program and the data for Finnish by CLAN. The analysis focused on the following aspects in both languages: vocabulary, the length of utterances, the inflection of verbals and nominals, articulation, comprehension of adult's speech/signing, and interaction.

After five-year follow-up, for the two oldest children, neither of the languages was at the normal age level. Finnish was the stronger language but also in FinSL both of the children had fairly good communicative skills. For the third, the youngest child, Finnish was normally developed. Her comprehension and communication skills of FinSL were weak, and there is a risk of her losing the signing skills altogether.

In the presentation, also the factors in the linguistic environment as well as other factors affecting the development of each language will be discussed more closely.

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