

Bilingual development of Finnish and Finnish Sign Language in deaf children using cochlear implant



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Language choices for deaf children

- In the 1970's the use of sign language (signed communication) started to be recommended (by Hearing centres) to parents of deaf and hard of hearing children in Finland
- In the 1980's and 1990's almost all the hearing parents of deaf or severely hard of hearing children started to learn sign language for the communication with their child
- Consequently, deaf children acquired sign language already at a young age
- After the cochlear implant (CI) operations were started for young children, the advice from the Hearing Centres was not to use sign language with the children, only signs to support speech
- Some families have chosen not to use sign language, and some have chosen to use both sign language (or signed Finnish) and spoken Finnish

A multi-case study

- Deals with bilingual development in Finnish Sign Language (FinSL) and Finnish in six deaf children using cochlear implant
- The hearing parents of these children started to learn and use sign language with their children after the child's deafness was recognized
- The parents also decided for a cochlear implant (CI) for their children
- The families attend a sign language program (Junior Program organized by The Service Foundation for the Deaf)
 - parents can learn sign language from deaf teachers
 - deaf children with their hearing siblings attend activities (in sign language) arranged by deaf signing adults

Subjects

Subject	Age of dg	Start of SL learning	Age of implant.	First record.	Second record.
1	2;10	2;10	7;0	7;6	8;6
2	3;0	3;0	4;10	7;6	8;6
3	at birth (0;6)	from birth	1;6	5;9	6;9
4	2;5	2;5	2;10	4;6	5;6
5	1;0	1;0	2;2	3;9	4;9
6	0;4	0;6	1;6	2;9	3;9

Results

- very individual
- many factors affect the development of these two languages
- In one-year period the development of spoken **Finnish** was positive for every child
 - Four of them show considerable improvement considering the ability to discuss in Finnish, length of utterances, grammatical development, and articulation
 - Two children have made some progress
- **Sign language** skills improved in three children; three of the children did not show much improvement

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- Subject 1: **dg: 2;10, SL: 2;10, CI: 7;0, data 7;6/8;6**
 - **FinSL skills did not develop**
 - used SL at home only when did not understand the spoken information
 - no contacts to sign language users beside Junior program
 - **Finnish skills developed substantially**
 - vocabulary more versatile
 - articulation clearer
 - used mainly Finnish during the days
 - when Finnish got better lost his interest in SL

- Subject 2: **dg: 3;0, SL: 3;0, CI: 4;10, data 7;6/8;6**
 - **FinSL skills developed**
 - fairly good SL skills already before CI
 - at age 8;6 used to some extend spatial and nonmanual grammatical devices
 - used SL at home less than before CI (mainly when did not understand the spoken information)
 - contacts to sign language users also beside Junior program
 - interested in SL ("I need two languages")
 - **Finnish skills developed substantially**
 - vocabulary more versatile
 - nominal and verbal inflection has developed clearly
 - articulation clearer
 - used more Finnish during the days
 - interested in Finnish (as well as SL)
 - more Finnish speaking contacts than SL users

- Subject 3: **dg: at birth, SL: at birth, CI: 1;6, data 5;9/6;9**
 - **FinSL skills developed**
 - parents have signed all the child's lifetime (older deaf sibling)
 - used some spatial and nonmanual grammatical devices
 - after CI used both languages (often simultaneously) ! but little by little more Finnish
 - uses SL at home with his sister, and during Junior program courses
 - **Finnish skills developed a little**
 - vocabulary developed a little
 - verbal and nominal inflection was developing, had though many imperfections
 - used more Finnish during the days

■ Subject 4: dg: 2;5 SL: 2;5, CI: 2;10 data 4;6/5;6

– FinSL skills developed

- before CI could express herself in SL fairly good (compared to age)
- at age of 5:6 used some spatial and nonmanual grammatical devices
- after CI used little by little more Finnish (father mainly speaks Finnish, mother uses SL more, often simultaneously with speech)
- SL using contacts only during Junior program courses

– Finnish skills developed a little

- vocabulary developed a little
- the development of verbal and nominal inflection was beginning to develop
- in articulation many imperfections

■ Subject 5: dg: 1;0, SL: 1;0, CI: 2;2, data 3;9/4;9

– FinSL skills did not develop

- before CI produced already short expressions in SL
- after implantation FinSL and Finnish were used often simultaneously
- sometimes meets a signing person beside Junior program signing contacts

– Finnish skills developed substantially

- vocabulary has increased
- nominal and verbal inflection has started to develop
- articulation was little clearer
- used mainly Finnish during the days

■ Subject 6: dg: 0;4, SL: 0;6, CI: 1;6, data 2;9/3;9

– FinSL skills did not develop

- before CI produced short expressions in SL
- after implantation at the beginning Finnish and FinSL were used mainly simultaneously, later only signs to support speech
- used SL at home only when did not understand the spoken information
- no contacts to sign language users beside Junior program

– Finnish skills developed substantially

- vocabulary more versatile
- nominal and verbal inflection has developed substantially
- articulation clearer
- used mainly Finnish during the days
- when Finnish got better interest in SL decreased

Parents' view on biligual development

- All parents see positive values in bilingualism between Finnish and FinSL
- All parents believe that Finnish will be the most used and most developed language of their children
- But they also value sign language skills, and believe that FinSL as a second language will give more flexibility in the life of their child
- All parents also see that it is very important to start to use sign language at a very early age when the child does not yet have any possibility to acquire a spoken language
- Also at the phase of acquisition of Finnish when the speech is not fully understandable sign language is important to clarify the intended message.

Discussion

- The children in this study have much more input in Finnish during the day than in sign language and they use considerably more Finnish than FinSL
- The results also reflect the amount of input and use of spoken Finnish
- Several other matters influence the development of each language:

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- age of diagnosis of the hearing loss
- age at which sign language begins to be used with the child
- the knowledge of sign language before benefiting from the CI
- individual ability to benefit from CI (physiological and psychological characteristics)
- amount and quality of spoken language input / signed language input
- attitude of the environment towards each language
- possibilities to use each language in proper and interesting situation
- friends using each language
- individual interest in languages
- the use of minority language demands powerful support and encouragement

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To conclude...

- The language questions must be handled individually
- The parents should be able to get versatile information about language acquisition, in general, and about bilingual acquisition especially
- In every case **support for language development** before pre-school age and **instruction at school** alike should be available **in both languages**
- Balanced input and use of both languages should be ensured
- The languages should be used separately, not simultaneously
 - ⇒ Gives the both languages an independent status in the child's mind
 - ⇒ Does not affect in negative way the grammatical development of either language

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