



# Manual signs: what does research tell?

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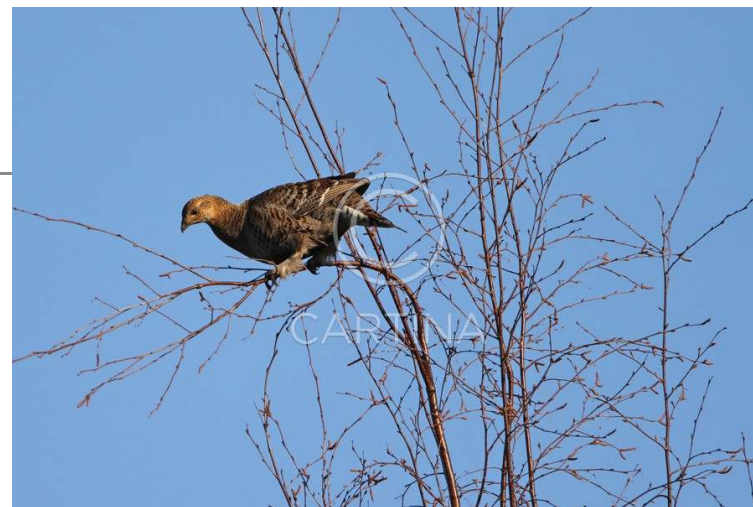


- Top-down – bottom-up research – do theories and practices meet?
- The practitioners had already been a long time up in the tree before the researchers at the bottom started to look up and try to define the species of the tree, how it had grown, was it useful, and what should be done to make it flourish.
- Basic research – applied research



# In the tree







# Defining the species and its special qualities





# Getting up to the tree - History

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- The use of manual signs as an augmentative or alternative communication form for individuals who did not develop to use speech seems to have begun in the 1970s in many countries.
- Examples of early Nordic approaches:
  - von Tetzchner, S. (1984). Facilitation of early speech development in a dysphatic child by use of signed Norwegian. *Scandinavian Journal of Psychology* 25, 265–275.
  - Johansson, I. (1981 – 1986). *Tidig språkstimulering av mongoloida barn*”
  - Launonen, K. (1987). Viittominen – kehitysvammaisenkin vaihtoehto? [Manual signing – an alternative also for a person with learning disabilities?] J. Salminen et al. (Eds) *Puheterapian vuosikirja 4 [Annals of speech therapy 4]*. Suomen Puheterapeuttiliitto ry:n julkaisu 15, 95-114.



# Manual signs today in Finland

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- The most common form of augmentative and alternative communication (Launonen, 2002)
- Used generally with children with intellectual disabilities, autism and specific language impairment (Linjama, 2010), either as a form of early intervention, or later when a child does not develop speech as expected.
- The threshold of introducing manual signs is quite low when a child does not develop speech
- "Best practice" – is there evidence and what kind of?



# Manual signs today in Finland

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- Linjama, T. (2010). Lasten tukiviittomien käyttö puheterapeuttien näkökulmasta [Children's use of manual signs from speech and language therapists' point of view]. Master's thesis, Institute of Behavioural Sciences, University of Helsinki.

<http://papunet.net/tietoa/en/papulaari/opinnaytt eet/gradut/tiina-linjama.html>



# What is evidence in the research on manual signs?

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- Research on manual signs alongside and as part of the general research on augmentative and alternative communication
- Many studies and systematic reviews include both aided and unaided communication forms (e.g. Millar et al., 2006; Branson and Demchak, 2009).
- What is known about manual signs: what is common with other forms of augmentative and alternative communication, what is specific to the use of manual signs? When and why does it matter?
- Specific and specific: Individuals and groups (of individuals?) – case studies and/or group designs?



# Findings and assumptions about the benefits in manual sign use

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- Does not prevent or delay speech and language development, but may, instead, enhance them (e.g. Bonvillian and Nelson, 1982; von Tetzchner, 1984; Luetke-Stahlman, 1985; Miller, 1992; Goldin-Meadow and Morford, 1994; Launonen, 1998; Millar, Light and Schlosser, 2006; Linjama, 2010).
- Improves general interaction, communication and linguistic skills (Millar et al., 2006; Linjama, 2010).
- Improves speech comprehension (Linjama, 2010).
- Positive developmental effects on social and cognitive skills (Launonen, 1998, 2003).



# Findings and assumptions about the benefits in manual sign use

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- Enhances learning of new concepts (Linjama, 2010)
- Facilitates word retrieval and diminishes word finding difficulties (Launonen and Grove, 2003; Linjama, 2010)
- Supports memory and attention (Linjama, 2010).
- Easy to affiliate in total communication (Bonvillian and Nelson, 1982; Launonen, 1998; Linjama, 2010).
- Makes children's unintelligible speech more intelligible (Linjama, 2010)



# Findings and assumptions about the problems in manual sign use

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- Memory load (Linjama, 2010)
- Some family members and other communication partners are not willing to learn manual signs properly, so that they could function as a genuine communication form for the individual (Linjama, 2010)
- Families and other communication partners tend to abandon manual signs too quickly after the child has started to use spoken words (Launonen, 2003)



**What research based and evidence based knowledge has been collected, in almost 40 years, about different aspects of manual signs as an alternative communication form?**

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- "Phonology"?
  - Morphology?
  - Lexicon?
  - Syntax?
  - Pragmatics?
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- Language development, language learning?
  - General linguistic skills?



# ”Phonetics” and articulation → Sign parameters /Nicola Grove

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- Handshape
- Location
- Movement
- Orientation
- Handedness
- Fingerspelling (from spoken language)
- Facial gestures: mouth, brow, head
  
- What should research tell about these?



# Syntax

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- Single-sign expressions or very short combinations form the most common syntax (e.g. Grove and Dockrell, 2000; Launonen, 2003)
- Sign combinations are often strings with no underlying structure (e.g. Grove and Dockrell, 2000)
- Influence of input?
  - Eric (Launonen and Grove, 2003) developed morphology and syntax in his manual sign system – also adult communication partners used combinations



# Language development and language learning

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- How should manual signs be taught to a child to make it a real communication form or a part of that?
- How to incorporate central features of early interaction in interaction which includes the aim of teaching the child manual signs?
- Joint attention (Clibbens, Powell and Atkinson, 2002; Clibbens and Powell, 2003)



# Future

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- Basic research: Definition of manual sign system(s) as alternative communication forms
- Applied research: Theoretical explanations for manual communication in practice
- Case studies and small-n studies → critical mass → reviews and generalisations
- International research projects from different viewpoints



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# As a researcher and a practitioner I thank you!

