

# Ableist language *teching* over sign language research

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# What is **ableism**?

- *“**Ableism** [...] is discrimination and social prejudice against people with physical or mental disabilities and/or people who perceive themselves as being disabled. Ableism characterizes people as they are defined by their disabilities and it also classifies disabled people as people who are inferior to non-disabled people.”* (Wikipedia)



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- Unfortunately, **ableism** is visible in many ways in **academia** and research:
  - who is included in terms of **acceptance and accessibility**
  - **how we use language** directly (e.g. *deaf-and-dumb*) or metaphorically (e.g. *fall on deaf ears*)



# Motivation

- I am myself a hearing signer (late-learner) and sign language linguist
  - Sign language linguists have **noted a rise in tech involving sign languages** – e.g. “sign language gloves”, machine-learning “translators”, etc.
- This is often ***technoableism***: *“rhetoric of disability that at once talks about empowering disabled people through technologies while at the same time reinforcing ableist tropes”* (Shew 2020: 43)
- But research in these areas often come with **ableist language** – that is, offensive labels for deaf/hard-of-hearing – which has led to open letters to publishers and retracted papers (Hochgesang 2021a)



# Defining *ableist language*

- The term ableist language is used here to mean **language referring to disabled from the perspective of abled people**, equating disabled with ‘deficient’, specifically words/phrases referring to **deaf and hard-of-hearing (hoh)**



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Deaf



Hard-of-hearing



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Deaf



Hard-of-hearing



Deaf-mute



Deaf and dumb



(Hearing) impaired



(Ab)normal



## Research question

*Is the perceived increase in tech-related sign language research correlated with an increase in ableist language?*





# Data

## Google Scholar

- papers matching “sign language”
- Years 2012–2022
- 162,800 articles

## Google Scholar Alerts

- papers matching “sign language”
- Oct 2017–Feb 2023
- 8,368 article titles



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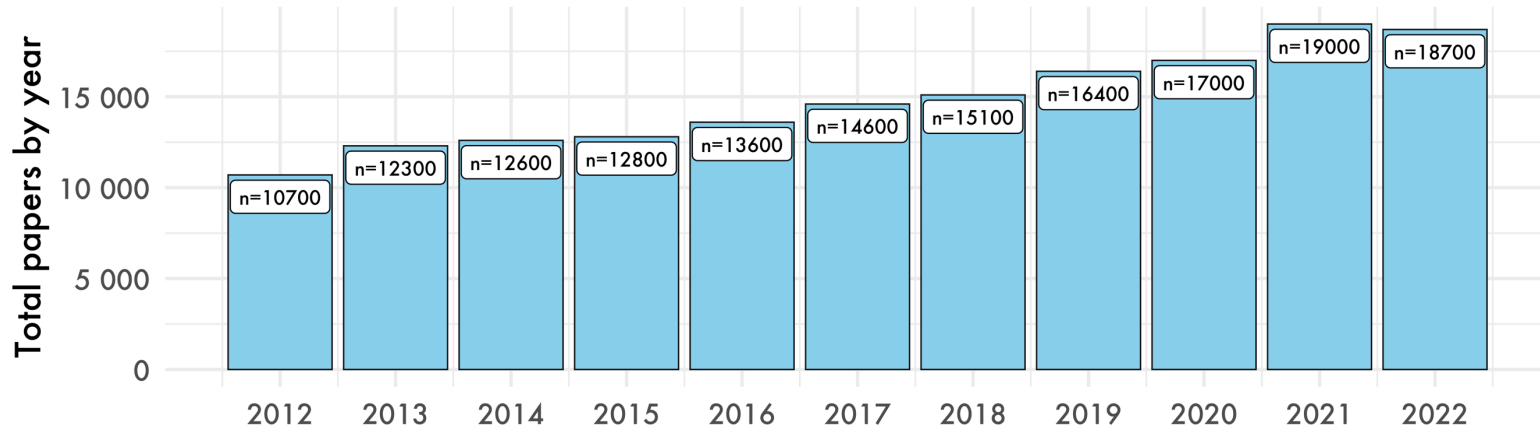


# Google Scholar

“sign language”

## Papers on Google Scholar (2012-2022)

Number of papers with search term "sign language"



# Google Scholar

“sign language”

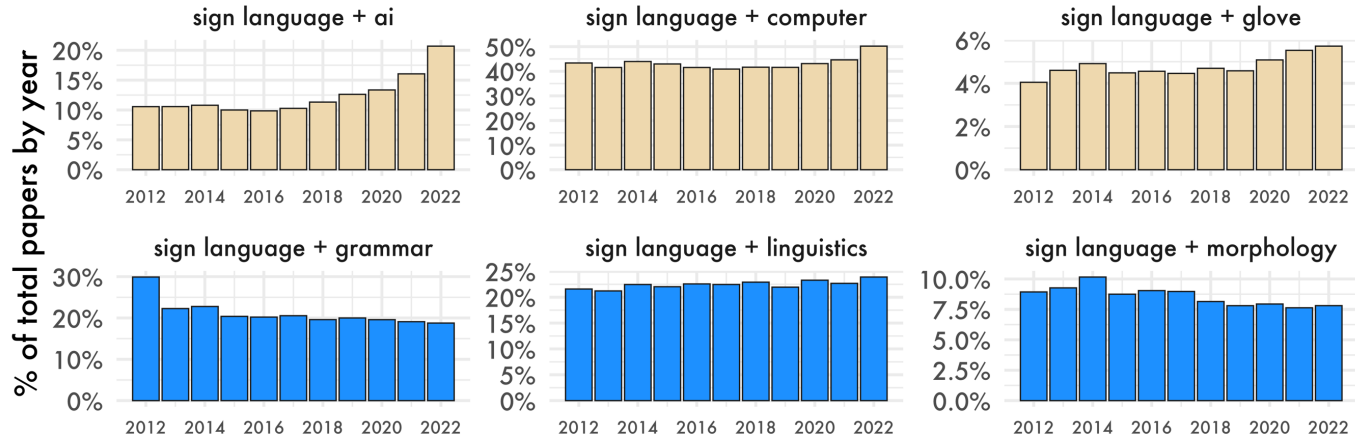


“ai” | “computer” | “glove”

“grammar” | “linguistics” | “morphology”

## Papers on Google Scholar (2012-2022)

Percentage of papers by search term and year



# Google Scholar

“sign language”

± “computer”

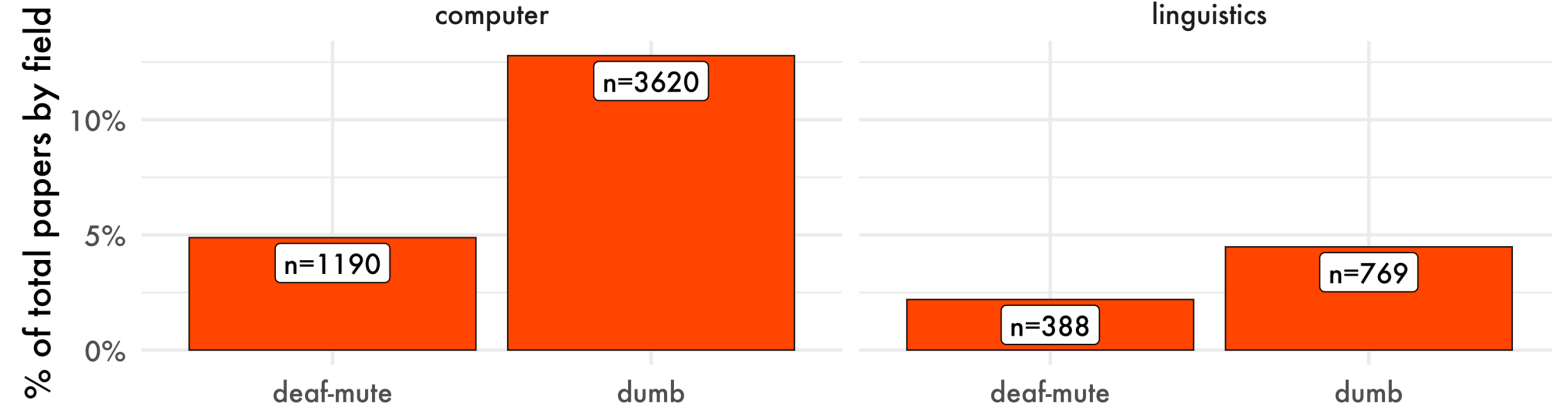
± “linguistics”

+ “deaf-mute”

+ “dumb”

## Papers on Google Scholar (2012-2022)

Percentage of papers by ableist word and field



# Data

## Google Scholar Alerts

- papers matching “sign language”
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# Google Scholar Alerts

## Tech

ai, application,  
android, arduino,  
artificial, automat,  
cnn, controller,  
convolutional, device,  
glove, machine, nlp,  
python, recognition,  
real-time, sensor,  
software, system,  
transformer, virtual,  
wearable, ...

## Linguistics

clause,  
communication,  
conversation, corpus,  
discourse, grammar,  
iconic, interaction,  
linguist, morphology  
neuroling, object,  
phonetic, phonology,  
psycholing, semantic,  
socioling, subject,  
syntax, ...

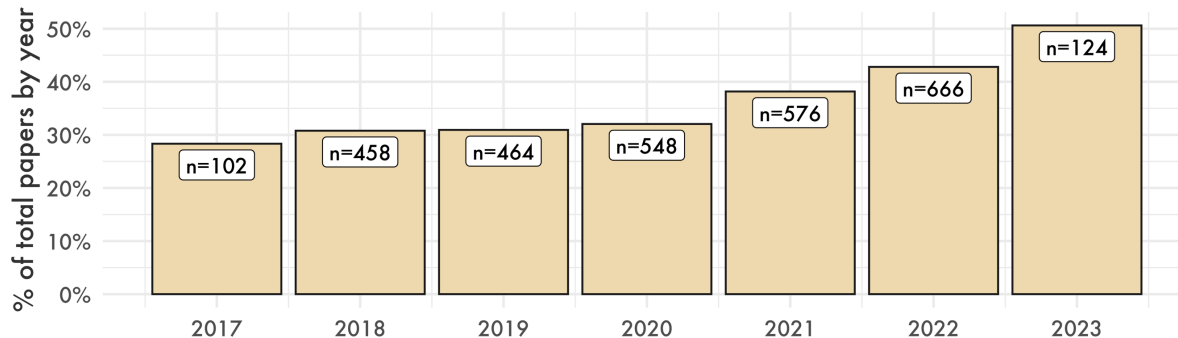


# Google Scholar Alerts

Tech

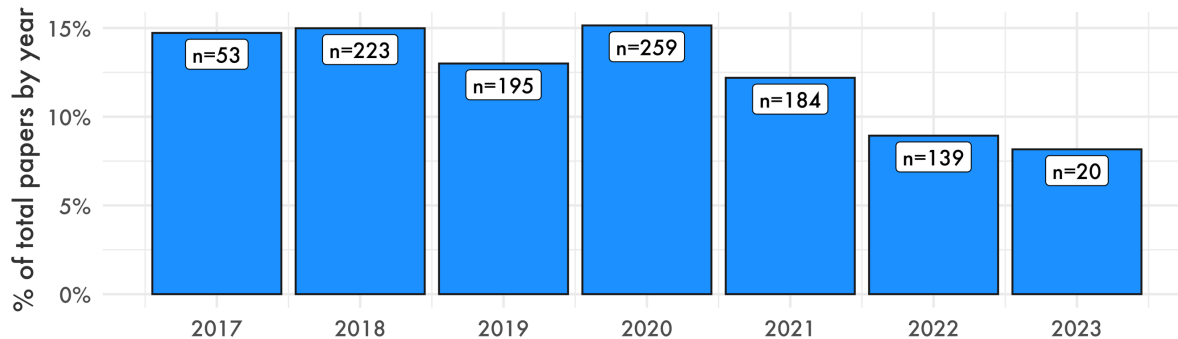
## Tech papers in Google Scholar Alerts for "sign language"

Percentage of titles containing tech words by year (Oct 2017 to Feb 2023)



## Linguistics papers in Google Scholar Alerts for "sign language"

Percentage of titles containing linguistics words by year (Oct 2017 to Feb 2023)



Linguistics

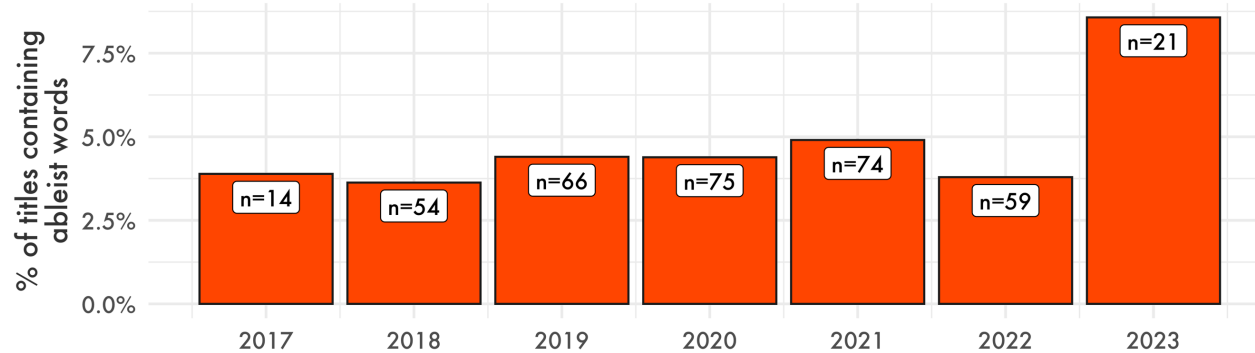




# Google Scholar Alerts

## Ableist titles in Google Scholar Alerts for "sign language"

Percentage of titles containing ableist words by year (Oct 2017 to Feb 2023)



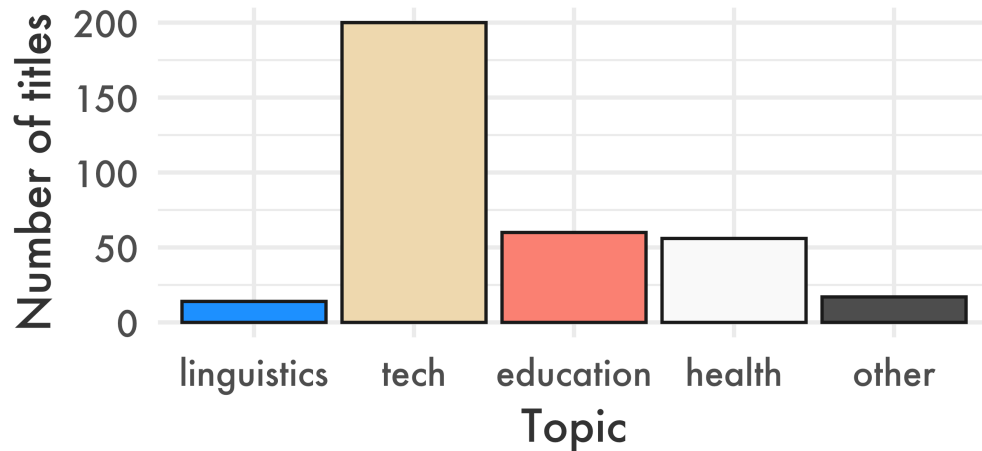
Word	Tokens
<i>impair*</i>	270
<i>dumb</i>	48
<i>mute</i>	42
<i>(ab)normal</i>	11
<b>Total</b>	<b>371</b>



# Google Scholar Alerts

## Ableist titles in Google Scholar Alerts for "sign language"

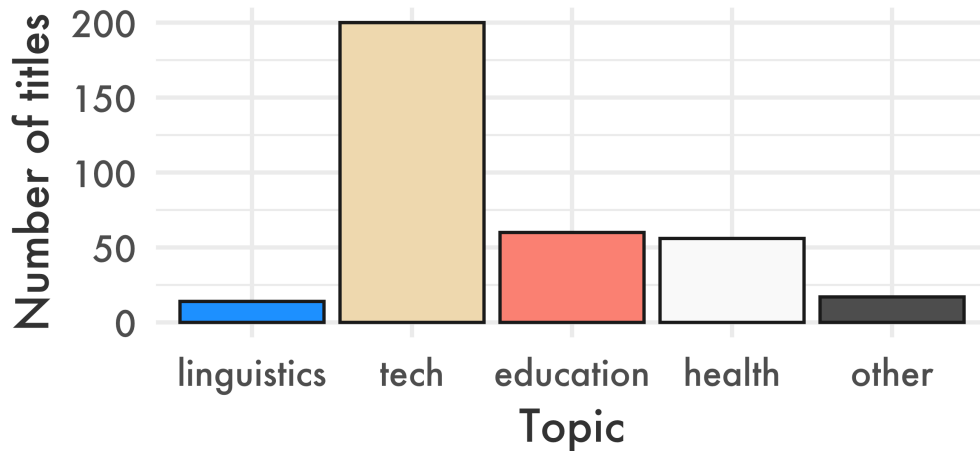
Number of titles containing ableist words by topic



# Google Scholar Alerts

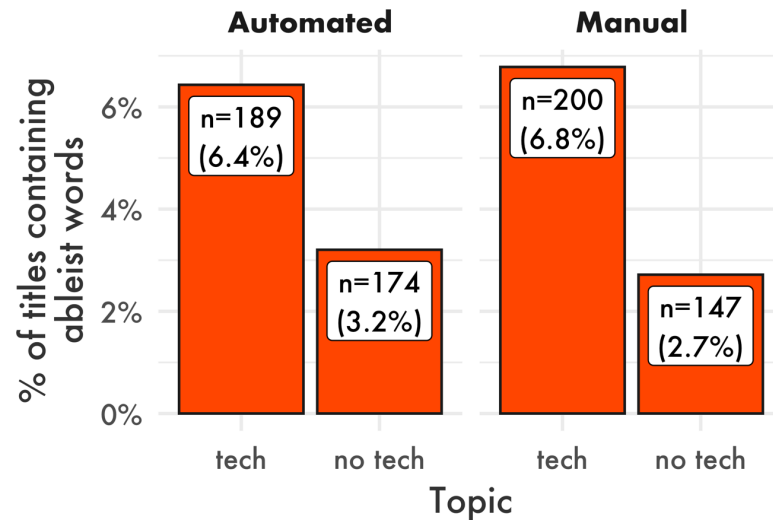
## Ableist titles in Google Scholar Alerts for "sign language"

Number of titles containing ableist words by topic



## Ableist titles in Google Scholar Alerts for "sign language"

Percentage of titles containing ableist words by topic



# Conclusions

- Ableist language in publications on SLs **correlates with tech**-related research
- Ableist language is **offensive, excluding** and suggests a **low level of awareness** of the actual wants and needs of deaf communities (cf. *technoableism*)
- **Ableist language reinforces biases** of both **researchers** (who is involved) and their **output** (resources and applications)



# Take-home message

- Researchers working on developing language resources for any group, but particularly marginalized ones, should:
  - have enough **knowledge and awareness** about the context and history of the group to **not reinforce offensive and oppressive language** use
  - work in **direct consultation and collaboration** with the community
- This has **already been outlined by many** (deaf) scholars advocating for inclusive, ethical research (e.g. Harris et al. 2009; Hill 2020; De Meulder 2021; Hochgesang, 2021b; Hochgesang & Palfreyman 2022)



Maartje De Meulder (2021: 18)

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*“who is the  
language technology  
for, and why?”*

# Thank you!

- De Meulder, M. (2021). Is “good enough” good enough? Ethical and responsible development of sign language technologies. Proceedings of the 1st International Workshop on Automatic Translation for Signed and Spoken Languages (AT4SSL), 12–22.
- Harris, R., Holmes, H. M., & Mertens, D. M. (2009). Research Ethics in Sign Language Communities. *Sign Language Studies*, 9(2), 104–131.
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- Hochgesang, J. (2021a). Open Letter to Springer Editors and Their Response.
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- Shew, A. (2020). Ableism, Technoableism, and Future AI. *IEEE Technology and Society Magazine*, 39(1), 40–85.





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