

Overview

The Design Domain of Speech Generating Devices

Prof Melanie Baljko

<https://piet.apps01.yorku.ca/>



Speech Generating Devices (SGDs)

Voice Output Communication Aids
(VOCAs)



Core Aspects

- functionality:
 - vocabulary set
 - selection method
 - audio output
- different users:
 - primary user
 - additional users

SGDs are often used by those who are nonverbal

What does 'Nonverbal' mean?

Related to non-verbal

- the different types of impairments are generally classified as:
 - sensory/perceptual, cognitive, linguistic, motor
- disorder of the brain vs disorder of the body: a division that is well established in the popular imagination
- 'onset': congenital, developmental, acquired
- permanent? temporary vs not temporary

Aspect #1

The power to design and deploy

vs

The 'power' to receive that which has been designed

Aspect #3

Diversity of use cases

support ability to function
in school/workplace

support socialibility

training/learning

support 'Activities of Daily Living' (AODL)

Diversity of SGD's

Aspect #4





AT Abandonment

Scherer et al, Zhao et al

- Of all purchased AT, a large percentage is left unused or abandoned
 - 29.3% overall
 - up to 75% for hearing aids
- Factors for abandonment:
 - poor device performance
 - lack of considering user opinion in selection
 - changes in user needs and priorities
 - ...

Niche for basic, low-cost SGDs

basic model for scaffolding

low-cost, low-stakes

stepping stone for next device