aBoard: a Cloud Computing Platform for Alternative Communication and Inclusive Education

Robson N. Fidalgo | Thiago P. Lima | Natália M. Franco | Augusto L. Lima | Edson A. Silva
{rdnf, tpl, nmf, all3, eas4}@cin.ufpe.br

Accessible Americas IV: Information and Communication Technologies for ALL
San José, Costa Rica. 21 to 23 November 2017
Let's do an empathy exercise?

https://www.theodysseyonline.com/empathy-homeless
How long can you stay without expressing your desires, opinions and feelings?

http://www.stuartduncan.name/autism/who-has-a-right-to-talk-about-autism/

http://www.tonygalvin.com/mutism/
What would happen if nobody understood you?
What would occur if you did not understand the world around you?
Our Potential Public

Individuals who have communication disorders:

- Cerebral Palsy
- Autism spectrum disorder
- Down Syndrome
- Stroke
- etc.

Beukelman and Mirenda (2013) estimated that approximately 1.3% of USA population (+/- 4 million) need alternative communication
What is Alternative Communication?

It is the use of other communication modalities to support or replace verbal communication.
What are the main benefits of Alternative Communication?

Alternative Communication helps to:

- **stimulate** interactions with other people
- **improve** the understanding, perception, attention, memory, conceptualization, language and inclusive literacy
- **increase** the self-esteem and the quality of life of the individual and his / her relatives
- **reduce** the frustration
Platform Overview

Mediators, family and education/health professionals

People who have communication disorders

User authentication and vocabulary storage

Vocabulary personalization

Sentence construction

User authentication and vocabulary storage

Platform Overview

Mediators, family and education/health professionals

People who have communication disorders

User authentication and vocabulary storage

Vocabulary personalization

Sentence construction
Our advantages

- Mediators, family and education/health professionals
- People who have communication disorders

**Cloud:** The vocabulary can be personalized and used by any PC or tablet anywhere in the world and it is always backed up
Our advantages

**Pictogram suggestion:**
it accelerates the pictogram search and helps to write more meaningful sentences
Our advantages

Quick answers: It allows parallel communication
Adaptations for inclusive education

Teaching letters, syllables or words
Adaptations for inclusive education

Teaching numbers and math operations
Adaptations for inclusive education

Teaching songs or telling stories
Adaptations for inclusive education

Teaching routines
News: Accessible keyboard
Next steps ...

Internationalization → English and Spanish

Pivot → social startup + partnerships (e.g., companies and governments) to operationalize and evolve the project
Demonstration

[Abboard Logo]
Thank you!
Gracias!
Obrigado!

Robson N. Fidalgo, Thiago P. Lima, Natália M. Franco, Augusto L. Lima e Edson A. Silva
{rdnf, tpl, nmf, all3, eas4}@cin.ufpe.br

Facebook: /AssistiveCAA
Website: assistive.cin.ufpe.br
Email: assistive@cin.ufpe.br