Fostering Inclusion: A Regional Initiative Uniting Communities to Co-Design Assistive Technologies

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Introduction

Assistive technologies (ATs) are often not appropriate or accessible to people with disabilities.

Continuous user involvement in design processes leads to more appropriate and less abandoned ATs [1, 2].

Joint design requires oversight to mitigate power imbalances and uncover implicit biases among developers [3, 4].
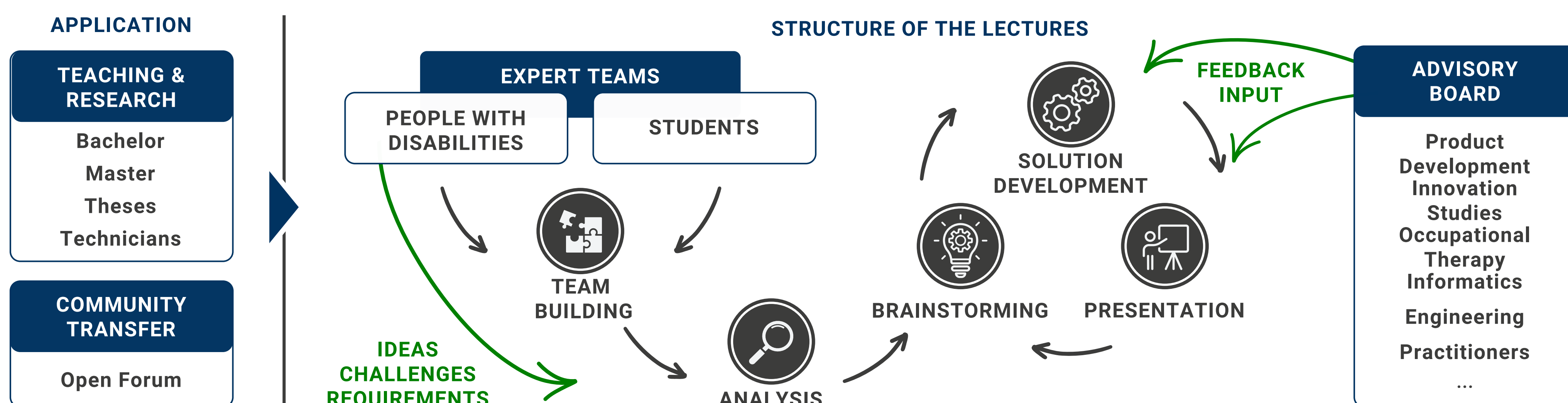
INNKLUSION

The initiative offers co-design lectures for the development of ATs.

After one year in practice, we analyzed its impact
- on the development of appropriate ATs and
- on the mitigation of ableism.

The Initiative's Approach

APPLICATION

TEACHING & RESEARCH
Bachelor
Master
Theses
Technicians

COMMUNITY TRANSFER
Open Forum

IDEAS CHALLENGES REQUIREMENTS

STRUCTURE OF THE LECTURES

EXPERT TEAMS
PEOPLE WITH DISABILITIES — STUDENTS

TEAM BUILDING

ANALYSIS

BRAINSTORMING

PRESENTATION

SOLUTION DEVELOPMENT

FEEDBACK INPUT

ADVISORY BOARD
Product Development Innovation Studies Occupational Therapy Informatics
Engineering
Practitioners
...

The Initiative's Impact

New opportunities emerge

co-design offers missing technical knowledge and equipment ▲

joint work produces solutions fulfilling individual requirements ▲▲◆

intensive exchange motivates ●▲▲

Lectures do not yield products

due to limited time, professional background of students, additional work for grading purposes ●▲▲

participants were content with results ●▲▲

everything is better than before ▲

Forum complements lectures

discussion and exchange about existing AT solutions, ideas and experiences ●▲▲◆◆

maybe you've never thought about it, but then you see, there's something, I could use that for myself or my clients ◆

ATs do not mitigate ableism

access to appropriate ATs does not bridge accessibility gap ▲▲◆

co-design should focus on exchange, discussion and joint learning ▲

achieving inclusion through technologization is simply an illusion ▲

Not enough people reached

only open-minded students with certain awareness participate ●▲

too small for meaningful change ▲

public outreach needs emphasis:
the more one is confronted with these issues, the more it becomes natural [...] ◆
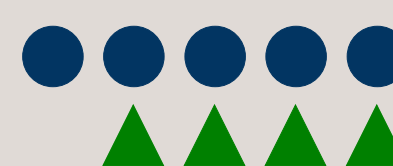
Creates awareness

broaden horizon, acquire knowledge about disability and ableism ●▲▲◆◆

reconsider taboos, learn from personal meetings, overcoming fears ▲▲◆◆

for many, this is occasionally the first point of contact with people with disabilities or chosen form of disability ◆

Methods

13 semi-structured interviews questions altered between stakeholder groups

●●●●● students
▲▲▲▲▲ people with disabilities
▲ personal assistant
◆◆ professional AT researchers
◆ head of the disability office

average 30 min
phone call, in-person
3 parts: introduction, development of ATs in co-design, ableism

transcription
multiple rounds of coding:
1. deductive,
2. in-vivo, open coding
3. merging, organization

Discussion

Lectures valued as safe and anti-ableist environment, but only a fraction of participants interviewed.

While lasting impact on participants is hoped for, mitigating societal ableism requires political changes.

AT solutions with instructions are shared online - we will investigate individual adaptions with AT professionals

encourage future participants to share feedback and experiences

offer co-design project within obligatory courses of other Bachelor degrees

Conclusion

ATs met individual requirements, but time, grading and knowledge constraints necessitate further developments.

Initiative positively influences participants' attitudes and views towards people with disabilities.

[1] Ellen Fraser-Barbour et al. 2023. Shifting power to people with disability in co-designed research. *Disability & Society*, 0, 0, 1–22.
[2] Betsy Phillips and Hongxin Zhao. 1993. Predictors of Assistive Technology Abandonment. *Assistive Technology*, 5, 1, 36–45.
[3] Kathrin Gerling et al. 2022. Reflections on Ableism in Participatory Technology Design. *Mensch und Computer 2022 – Workshopband*. Gesellschaft für Informatik e.V.
[4] Kirsten Shinohara et al. 2018. Tenets for Social Accessibility: Towards Humanizing Disabled People in Design. *ACM Transactions on Accessible Computing*, 11, 1, 1-13.

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