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Cross-cultural evaluation of a web application to support communication and collaboration among stakeholders of the school inclusion of children with ASD

I. Saint-Supery, H. Sauzéon, C. Maillart, N. Neu, E. Meyer, C. Mazon



Material and methods



Results



Discussion

Introduction

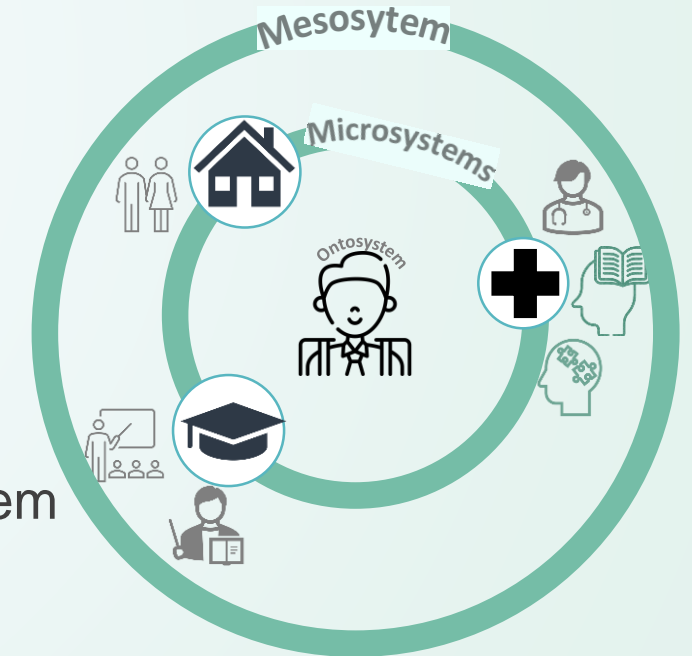
Context of the research

ASD and schooling

- Inclusion rates drop as the school level increase
- Large inter-individual variability → personalize care and support
- Importance of the proximal environments

Communication and collaboration

- Share knowledge, vocabulary and everyday information impacting them
- Hard to set up : lack of time, lack of dedicated tool



ToGather mock-up

The screenshot shows the top navigation bar of the ToGather mock-up. On the left is the logo for 'TOUS ENSEMBLE'. In the center is the school name 'Saint Louis Middle School' and 'BLEUET Vivien'. On the right are three icons: a house for 'Home', a person for 'My account', and a right-pointing arrow for 'Log out'. Below this is a horizontal menu with six items: 'Profile' (highlighted in dark green), 'Skills', 'Meetings', 'Compendium of tips', 'News', and 'Contacts'.



Profile

Particularities of the child for a quick familiarization

ToGather mock-up

TOUS ENSEMBLE

Saint Louis Middle School
BLEUET Vivien

Home My account Log out

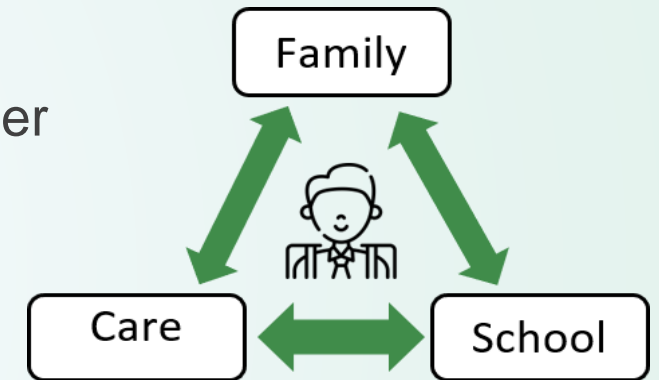
Profile Skills Meetings **Compendium of tips** News Contacts

Compendium of tips
Psycho-educational tips for the pupil

Aims and contributions of the study

Participatory design method

- Actors on the ground and researchers have equal decision-making power
- Addresses societal needs through field-driven methods



Applicability to another organisational system

- Different synergy between School, Care and Family in Belgium and France

➔ Are participatory design results applicable only to the context in which they were created?



Introduction



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Participants

Nielsen & Landauer (1993): 5-10 subjects to detect 85% of the main ergonomics design errors



7

Teachers



6

Parents

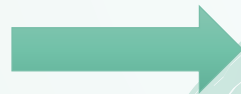
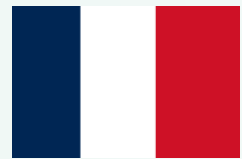


7

Care professionals

Mean age: 38,5 (range 21-57)

n = 20



7

Teachers



7

Parents



7

Care professionals

Mean age: 44,8 (range 27-60)

n = 21

Material

Personas

Roles



Alex

Parent



Jupiter

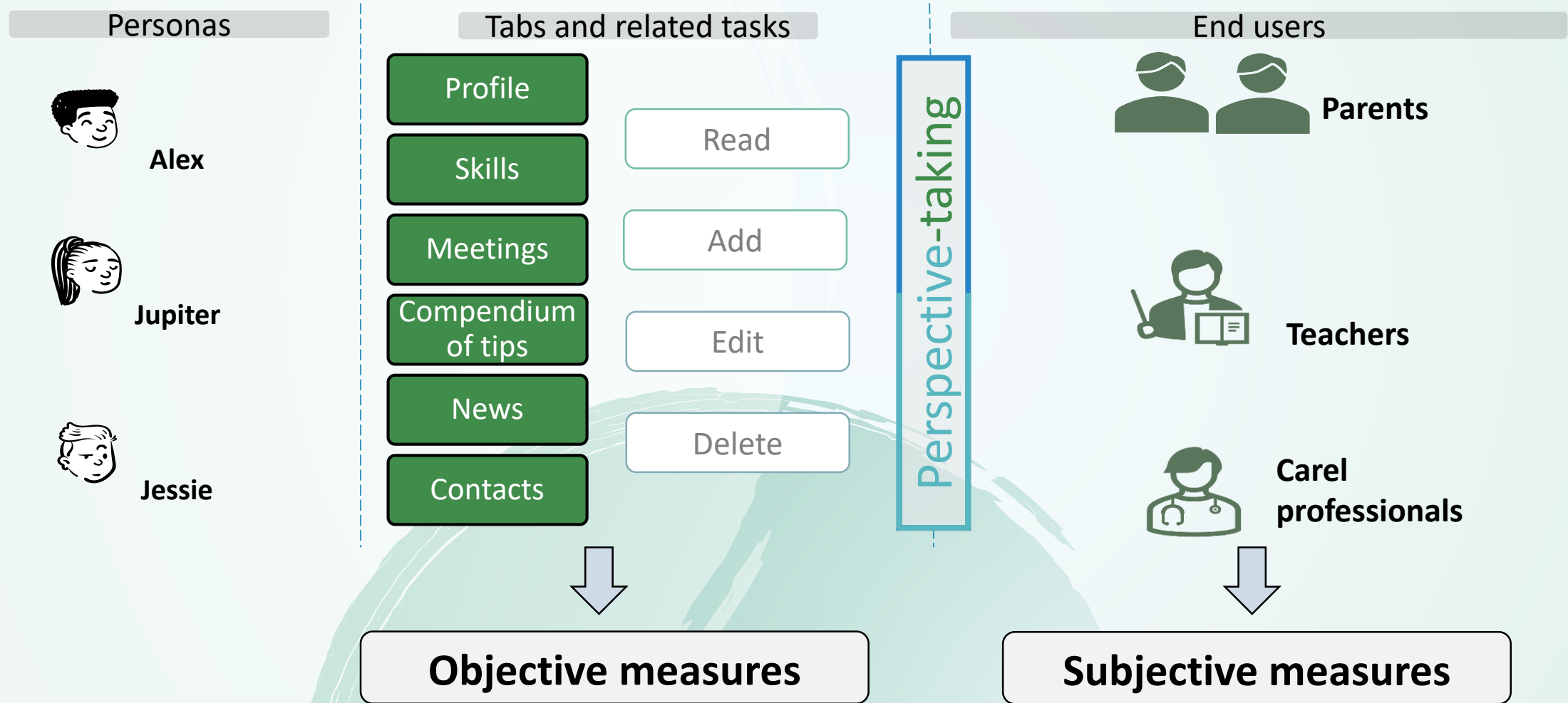
Teacher



Jessie

Care

Methodology



Methodology

Objective measures

- Usability measures
 - Effectiveness
 - Efficiency

Subjective measures

- Scenario-based subjective usability
- System Usability Scale
- User Experience Questionnaire
- NASA – Task Load Index
- Self-determination for a collaborative work



Introduction



Material and
methods



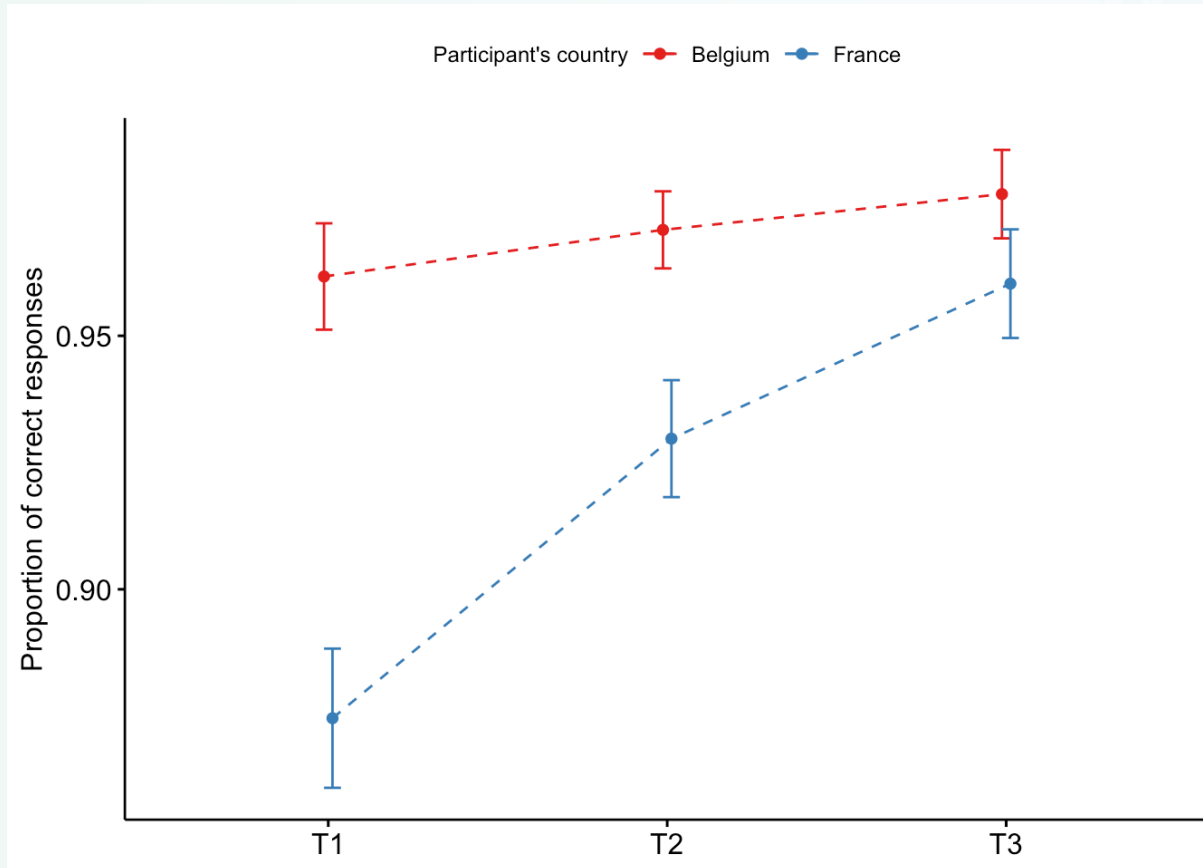
Results



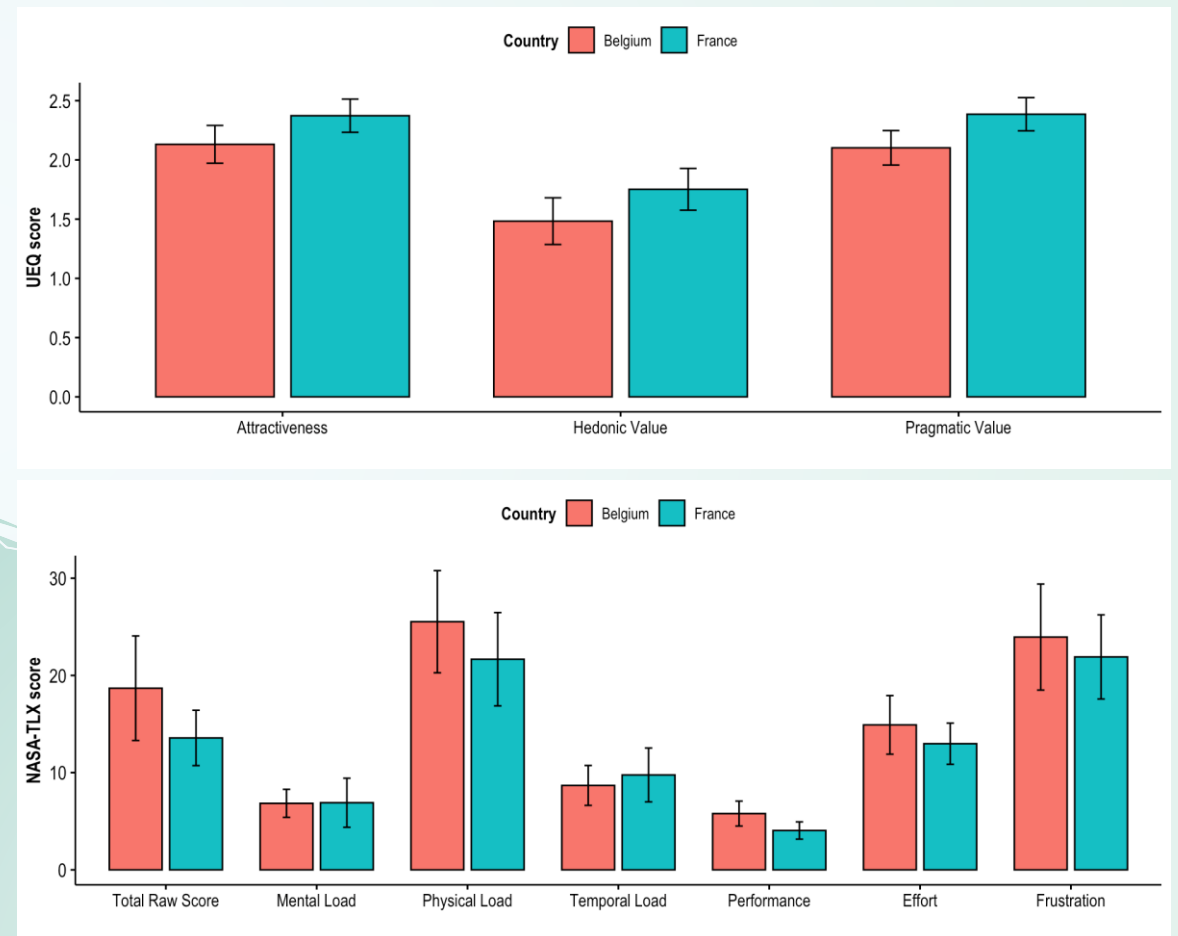
Discussion

Results

Objective measures



Subjective measures



Summary of the results

Both samples easily took the grips of the tool, appreciated using it and the interface design

Belgium

- Faster ease of use
- Ceiling effect ?
- Less tailored to their specific need



France

- It took longer for the French to find it easy to use
- Tailored ++ for their specific needs thanks to participatory design





Introduction



Material and
methods



Results



Discussion

Discussion

- Support the synergy between the 3 parties via a digital shared space
- Proof of Concept

National initiatives in this vein



SmartSchool



Livret Parcours Inclusif



- Teams are very diverse in terms of will to use computer and abilities
 - Accessibility
 - Ease of use

Perspectives

- Belgium and France share the same language → Test the applicability in a non french-speaking country
- Long-term field study → Can a digital shared space support and improve communication and collaboration in a follow-up team ?