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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

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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





# Introduction



Material and methods



Results



Discussion

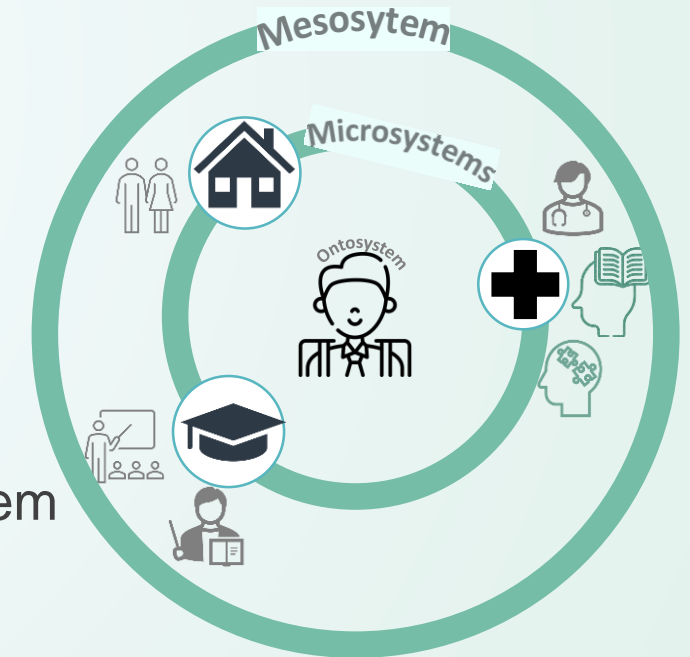
# Context of the research

## 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 'TOUS ENSEMBLE' logo. 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

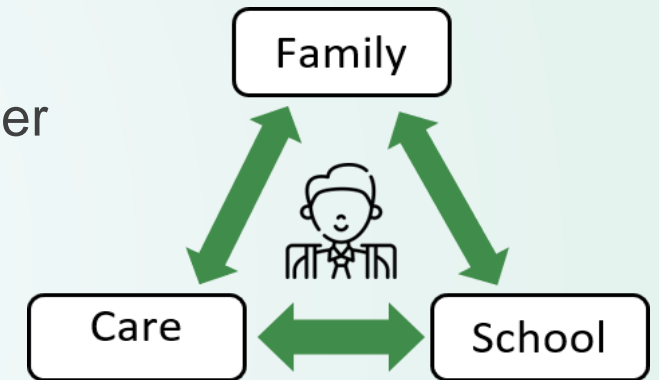
Profile Skills Meetings **Compendium of tips** News Contacts

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?



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# Participants

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



7

Teachers



6

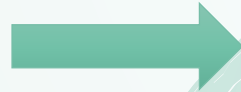
Parents



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

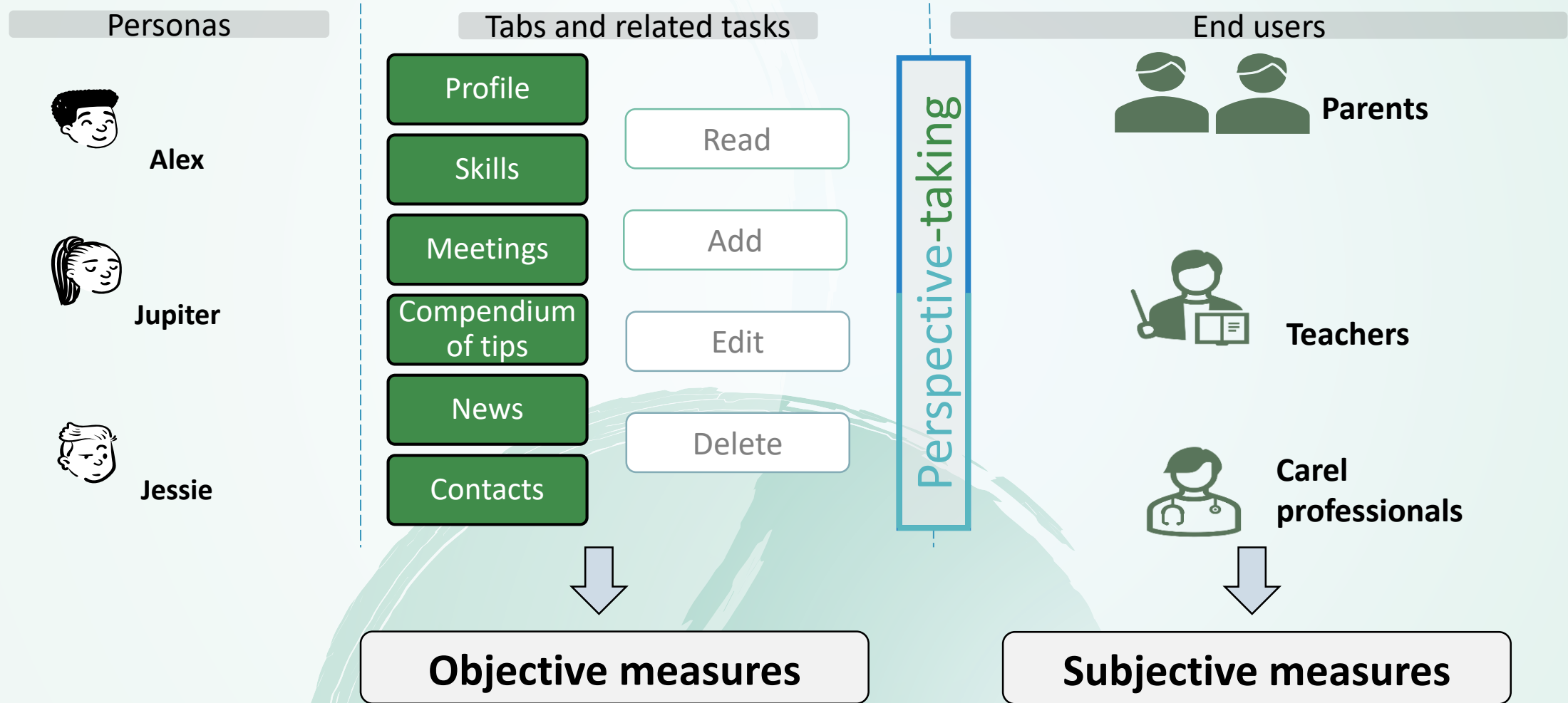
Teacher



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



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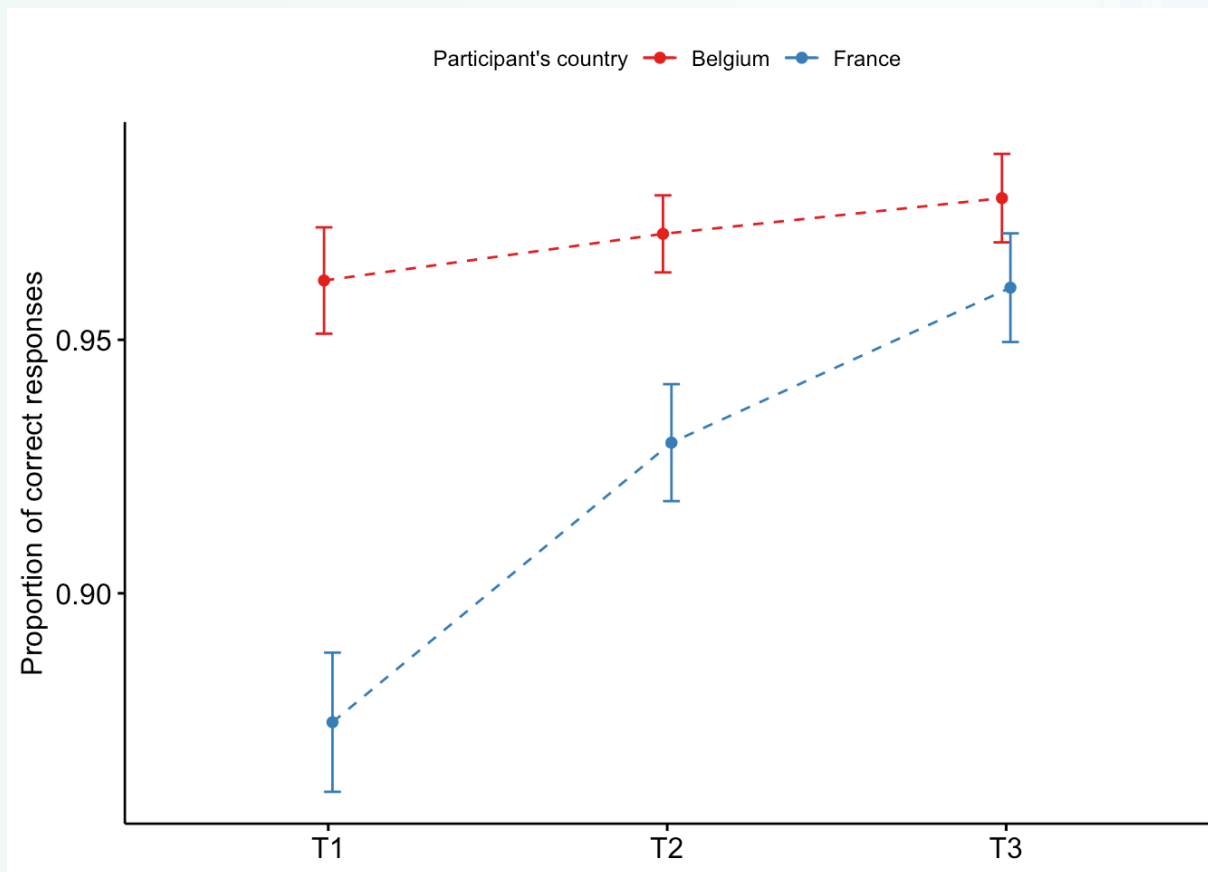
Results



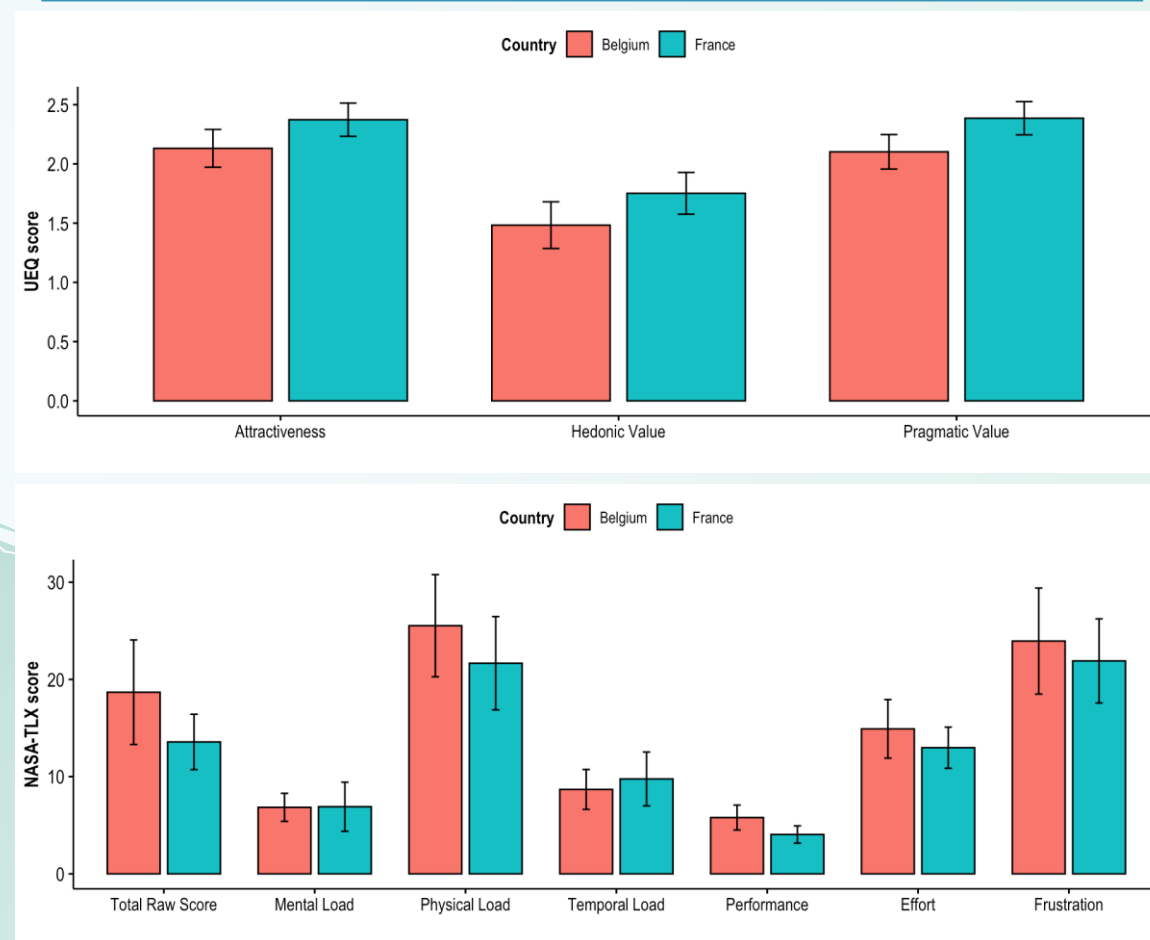
Discussion

# 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





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# 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 ?