

How can we teach effectively in Synchronous Hybrid Education (SHE)?

Thy Tran Khanh

Prof. Dr. Annelies Raes

Prof. Dr. Ginette Lafit



AGENDA

1. Synchronous Hybrid Education (SHE)

2. Hybrid Collaborative Classroom

3. Case study: Master of teaching Behavioral Sciences course via Teacher Orchestration Load (TOL) framework

4. Upcoming Research



1. Synchronous Hybrid Education (SHE)



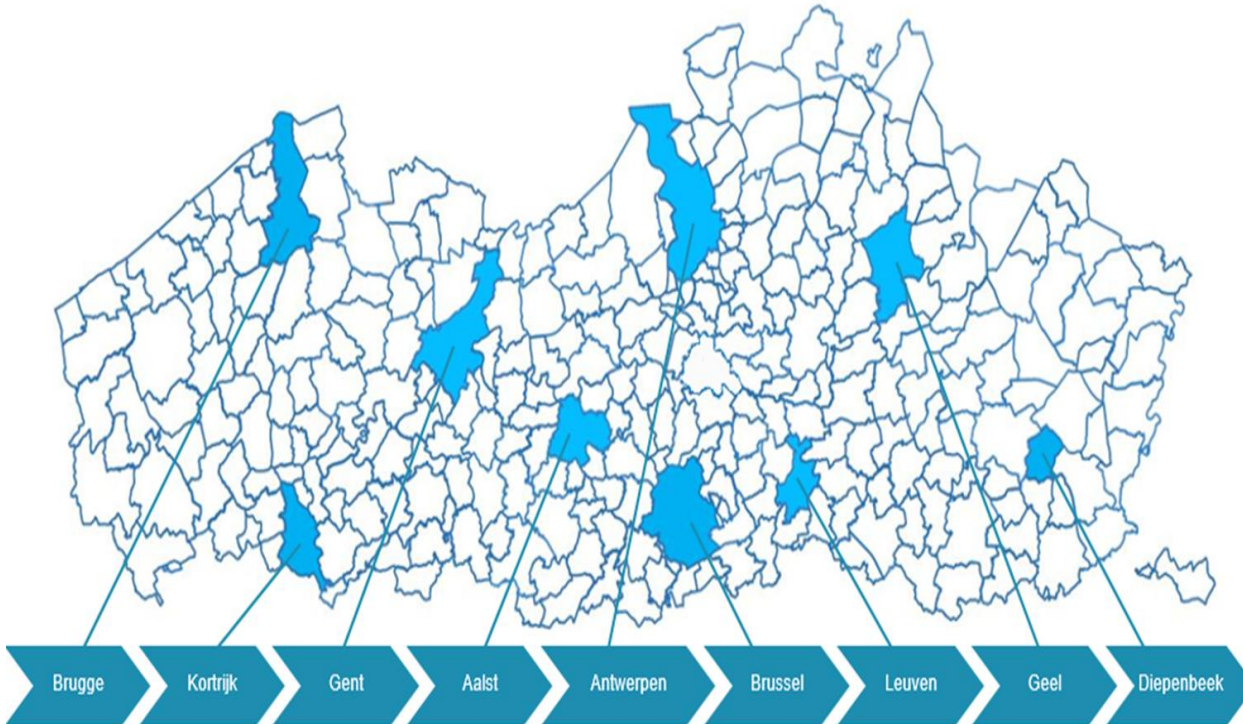
2018, Kortrijk

2021, Kortrijk



2024, Leuven

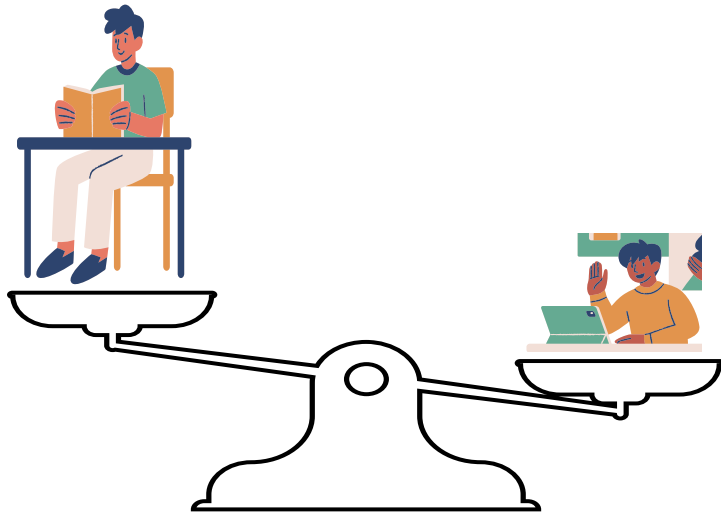
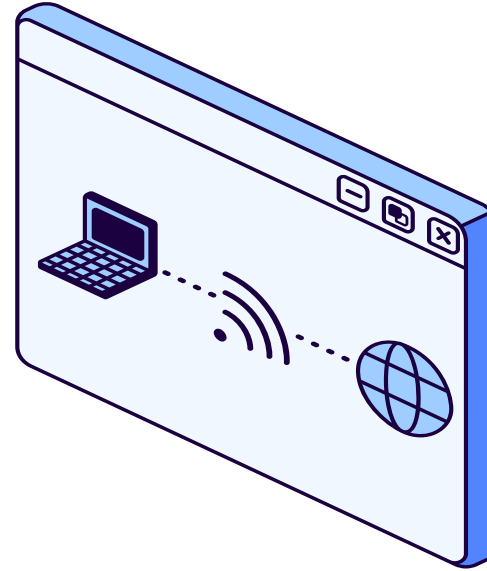
Main Benefits



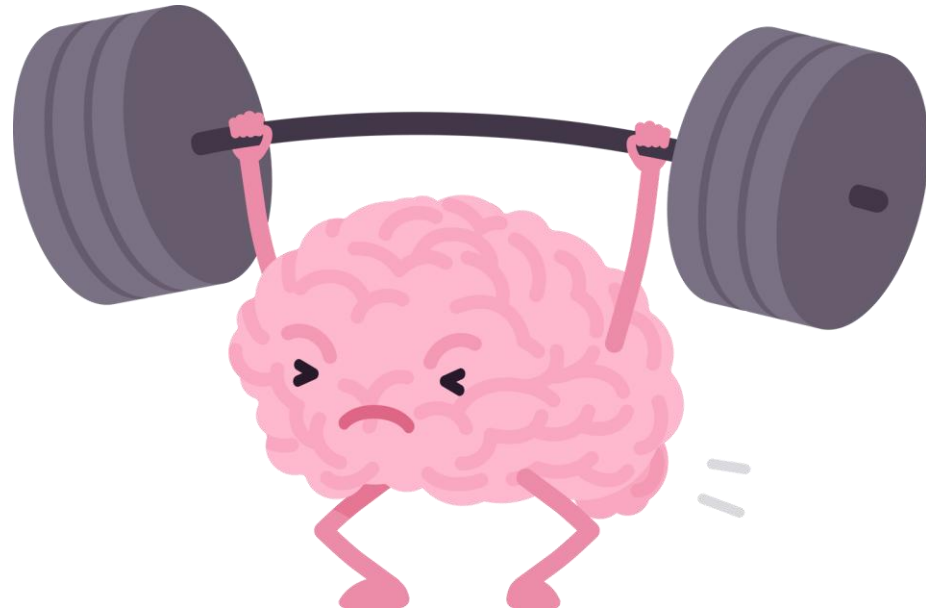
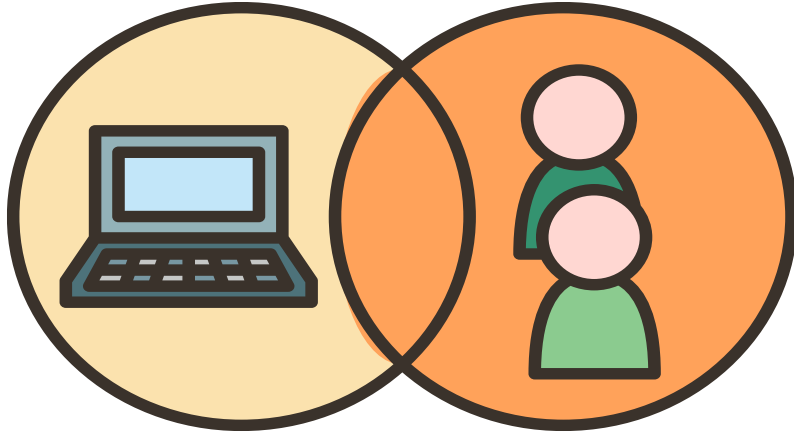
- Multi-campus education
- Guest speakers
- Life-long learning

Main Challenges

- Technical issues
- Network disruptions



- Different learning experiences
- Remote students feel excluded



Main Challenges

- manage both locations
→ **Teacher Orchestration Load**

Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2020). A systematic literature review on synchronous hybrid learning: Gaps identified. Learning Environments Research.

2. Hybrid Collaborative Classroom @ Leuven



- Facilitate mixed-modality collaborative learning
- Serve as “a living lab” for research and innovation in hybrid teaching and learning

Keulemans, T., Raes, A., et al., (2025). A Next Generation Hybrid Classroom: Facilitating Mixed-Modality Collaborative Learning in a Hybrid Context. In Hyb-IT-up! Designing Effective Hybrid Teaching and Learning. Springer Nature.

Classroom Orchestration

Conducting learning activities "the real-time management of **multi-plane** scenarios under multiple constraints" (Dillenbourg, 2015).

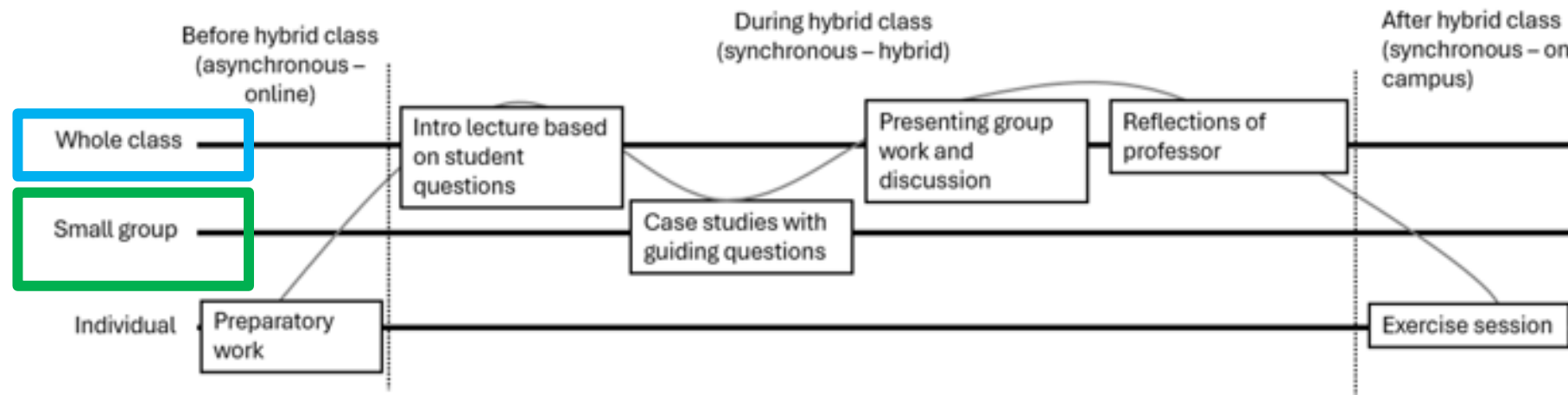


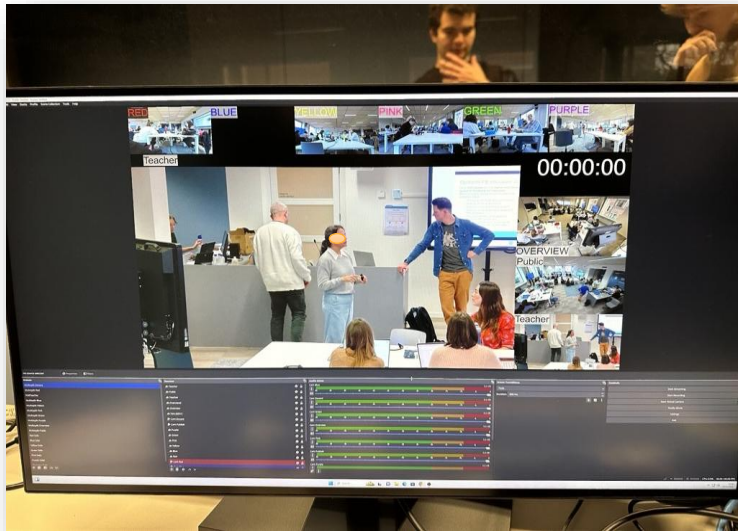
Figure 1. Orchestration Graph of General Physics III

3. Case study: Master of teaching Behavioral Sciences course



- Oct – Dec 2025
- Leuven ∞ Kortrijk
- Co-teaching

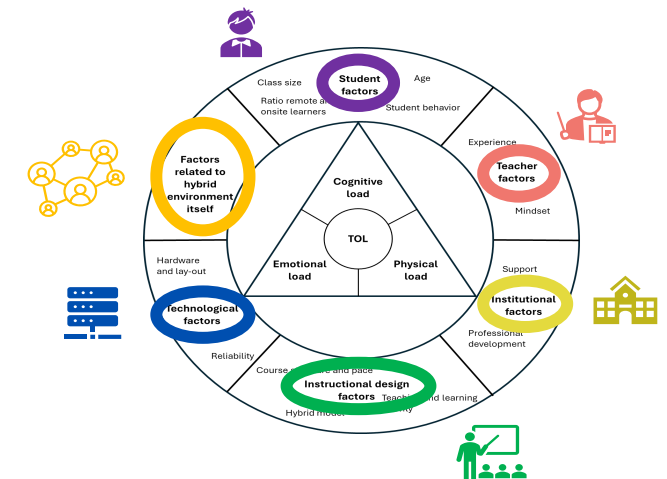
Methodology



Observations



Focus group
interview



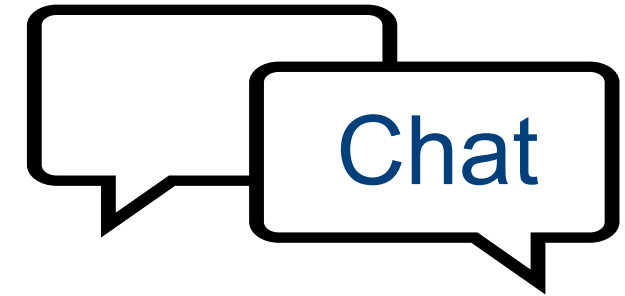
Analysis via **Teacher
Orchestration Load**
framework

What worked?



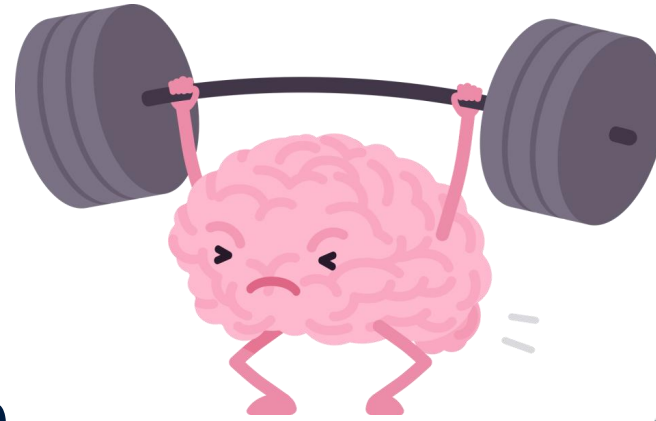
Lectures

More included and engaged through active interaction and questioning.



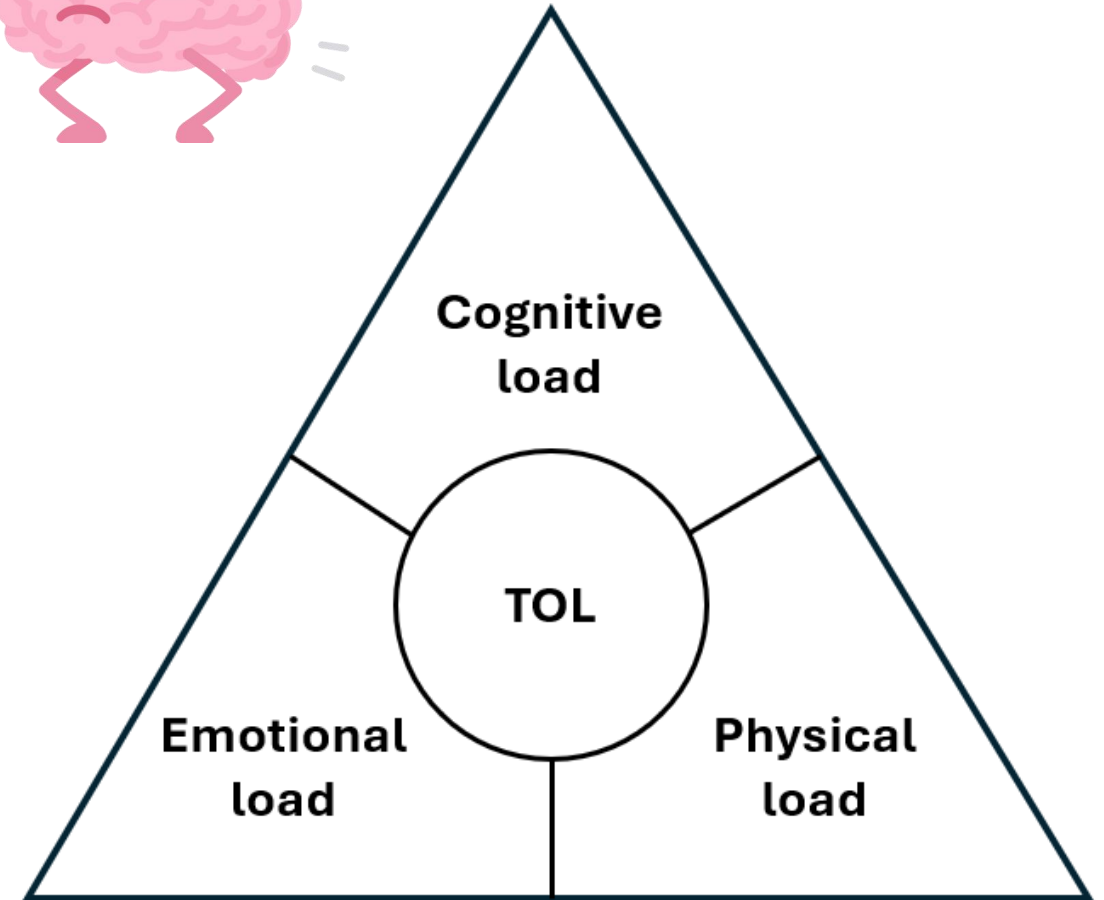
Group work

Challenges?

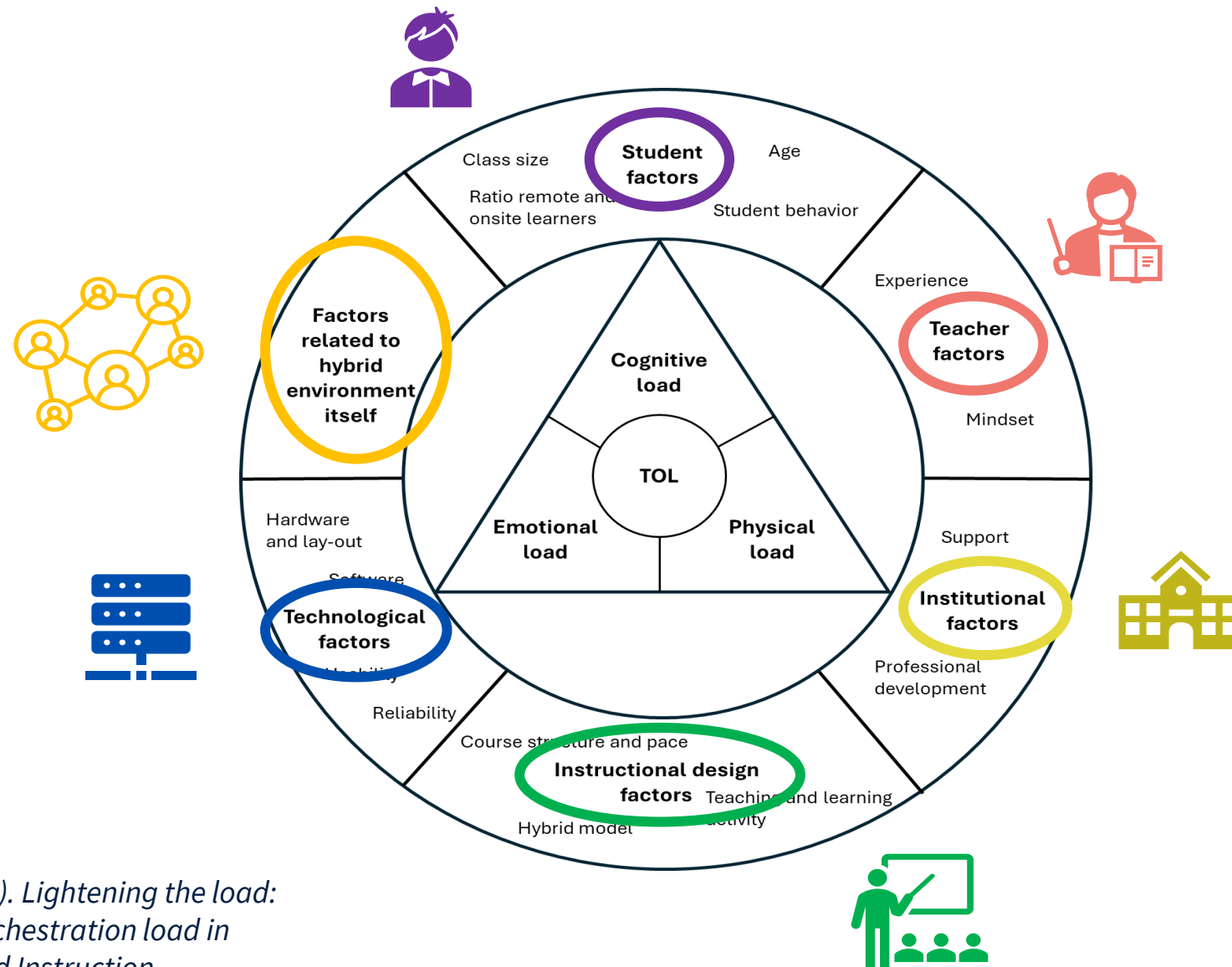


Teacher Orchestration Load (TOL)

The effort necessary for the teachers to script and conduct learning activities
(Cuendet, 2013, Keulemans et al., 2025).



Teacher Orchestration Load framework (TOL)



Keulemans, T., Depaepe, F., & Raes, A. (2025). *Lightening the load: Unveiling the factors influencing teacher orchestration load in synchronous hybrid education. Learning And Instruction.*

Factors increasing TOL



Technological factors

Technology Reliability

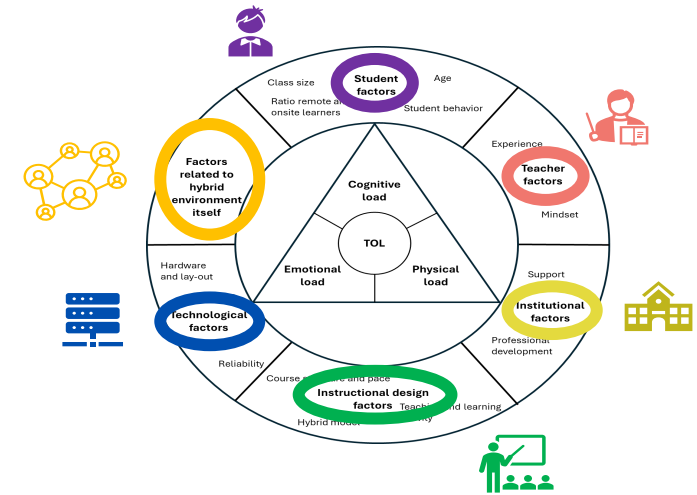
Hybrid classroom design,
hardware, and software



Hybrid environments

Limited non-verbal cues
-> missed communication

Constant effort to include
remote students



Factors increasing TOL



Instructional design factors

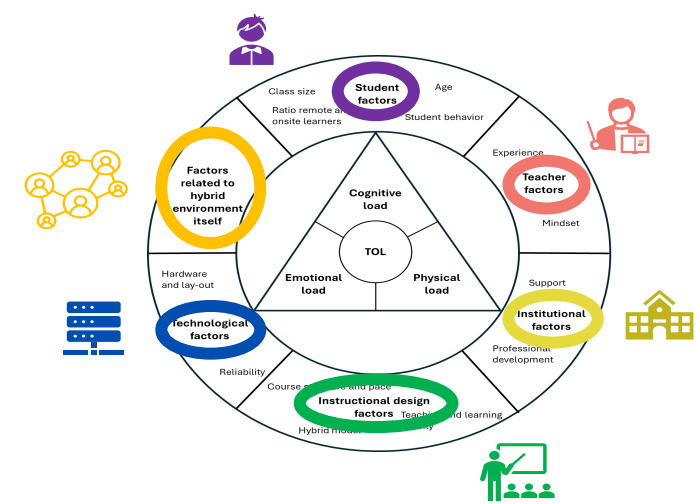
Tremendous teaching and coordination demands

Learning the new hybrid normal



Institutional factors

Strong need for didactic and technical support



Factors increasing TOL



Teacher factors

Strong commitment to all students' learning

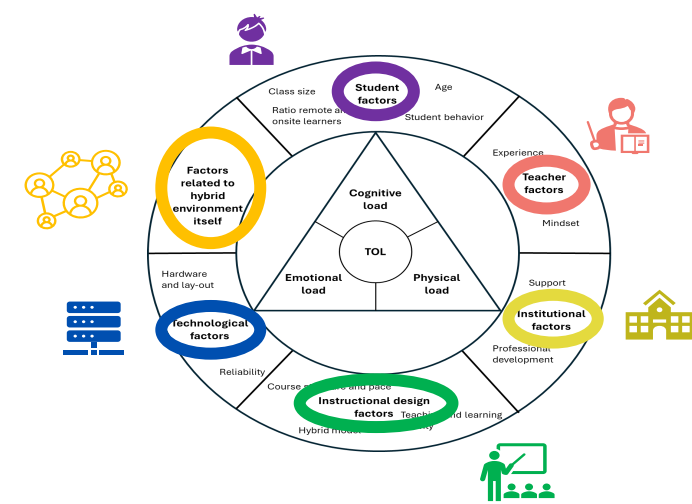
Lack of familiarity with technology & hybrid classroom



Student factors

Mindset and engagement

Imbalance between on-site and online participation



Teacher Recommendations

Give remote learners clear roles that add value to group work.

Develop SHE teaching skills through practice and reflection.

Provide clear scripts for all learners & Prepare backup plans for technical issues.



(Online) Student Recommendations

Provide clear introduction and participation guidelines

Create initial face-to-face interactions to build trust for effective hybrid collaboration.

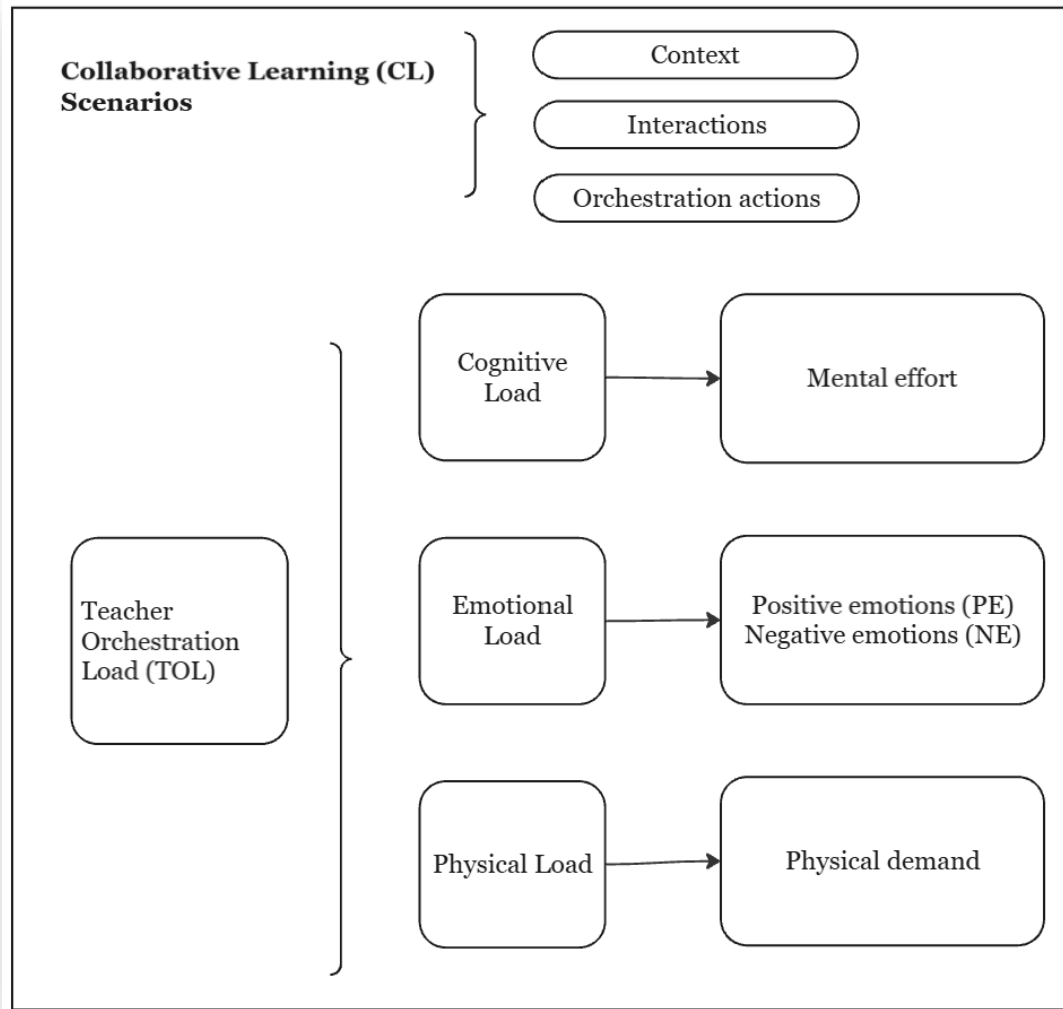
Assign an online learning facilitator for technical and learning support.



4. Upcoming research

Project: **Co-orchestration** of **Collaborative Learning** in **Synchronous Hybrid Education**

- Investigate the factors contributing to **high orchestration load** for teachers in collaborative SHE settings.
- Design interventions
 - Reduce teacher' orchestrations load
 - Facilitate the engagement of (remote) students



Let's talk!

khanhthy.tran@kuleuven.be

