Cognitive Load in Interpreting and Translation (CLINT)

As language experts, interpreters and translators play an important role in fostering international communication. Specific competences and strategies allow them to cope with complex language input. Preliminary research suggests that the processing of oral and written texts that deviate from linguistic and pragmatic norms can lead to cognitive overload. The objectives of this project are therefore to gain a better understanding of the various dimensions of cognitive load during multilingual language processing.

Project summary

The interdisciplinary research project **Cognitive Load in Interpreting and Translation** (CLINT) focuses on performance, self-report, behavioural and physiological indicators of cognitive load when trying to understand input from a language other than your native language.

A team of researchers from the ZHAW and UZH is using a mixed-methods approach to assess multilingual language processing of translators and interpreters (T&I) and non-T&I multilinguals in laboratory and simulated workplace settings.

Research questions

- **How do interpreting and translation skills influence multilingual language processing?**
- **What strategies do interpreters, translators and non-T&I multilinguals use in order to process different types of language input?**
- **Are there any relationships between cognitive effort and physiological and emotional responses?**
- **To what degree do aspects of personality influence cognitive load in multilingual language processing?**

Data collection methods

The recursive mixed-methods design of the project includes:

- **language processing experiments (i. e. interpreting, translating, summarising) in simulated workplace settings at the ZHAW Institute of Translation and Interpreting with**
- **video recordings, eye tracking, keystroke logging, screen recordings, questionnaires, retrospective verbalisations, interviews and heart-rate measurements**
- **language processing experiments in the UZH Neuropsychology Laboratory measuring brain activity (EEG), heart rate, electrodermal activity, eye tracking and behaviour**
- **self-report observations in an online survey**
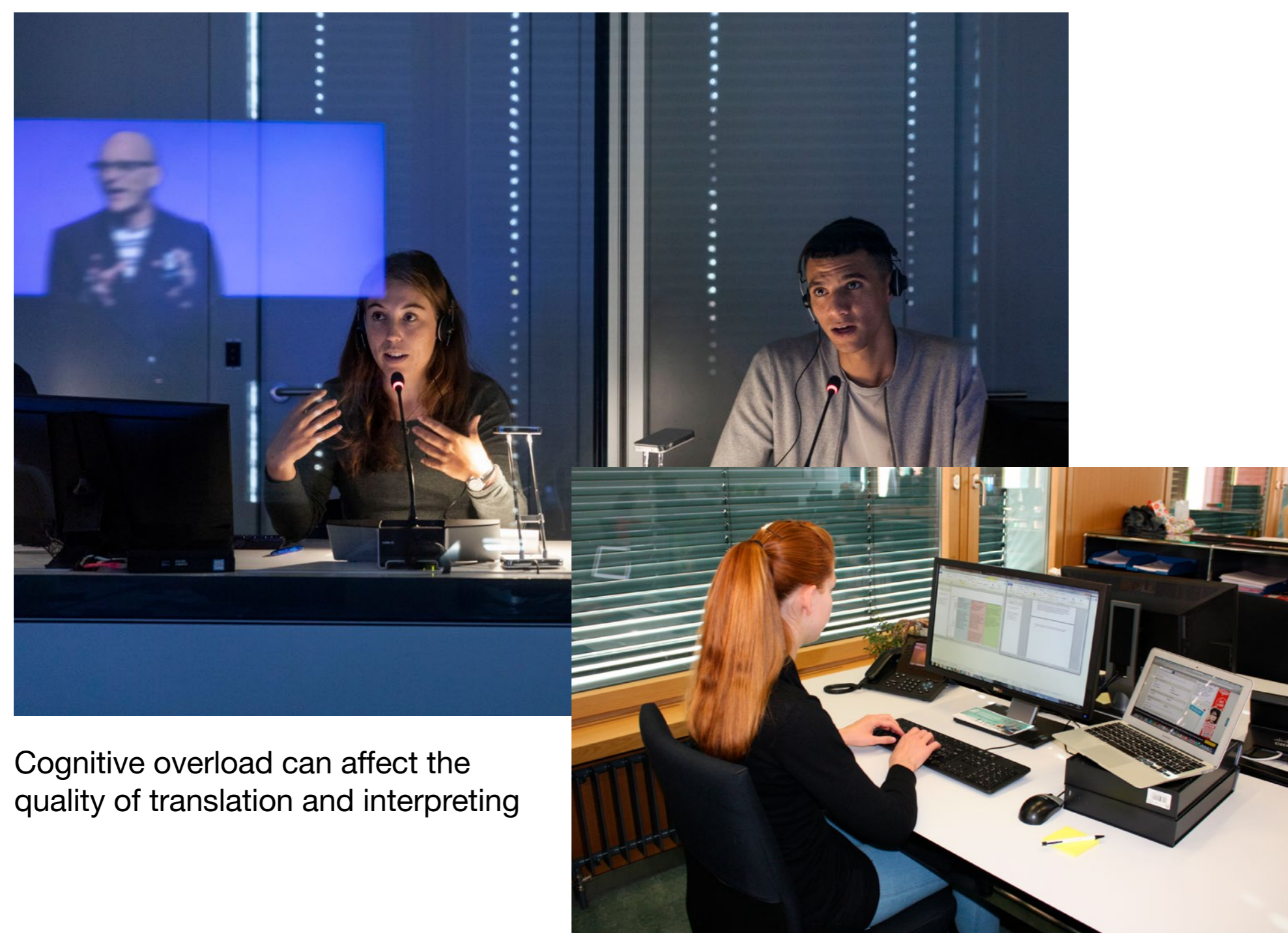
Cognitive overload can affect the quality of translation and interpreting
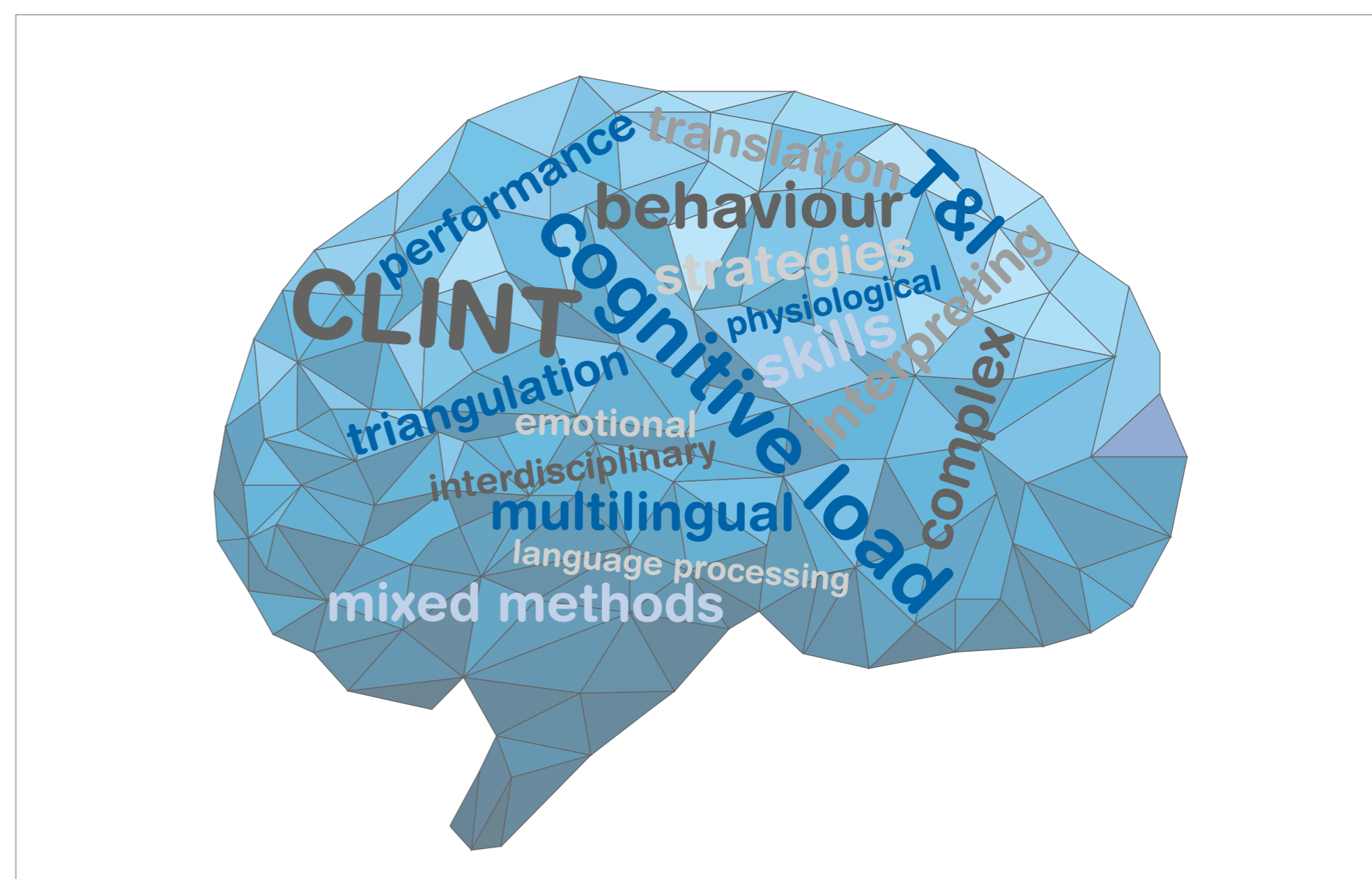
Participant groups

Nine groups of participants tested in both the simulated workplace and lab settings (approx. 250 participants)

Profession / Expertise	Interpreters	Translators	Non-T&I multilinguals
Beginner	BA multilingual communication	BA multimodal communication	BA education/ literature
Advanced	MA interpreting	MA translation	MA education/ literature
Professional	Conference interpreters	Specialised translators	Teachers/writers

Relevance and practical applications

- **Provide tools and strategies for BA students in Applied Languages and MA students in Translation or Conference Interpreting as well as for professionals to assess and deal with varying cognitive demands of language-related tasks**
- **Enhance cognitive ergonomics for professionals when performing complex multilingual tasks**

Recent project publications

Albl-Mikasa, M., Ehrensberger-Dow, M., Hunziker Heeb, A., Lehr, C., Boos, M., Kobi, M., Jäncke, L., & Elmer, S. (2020). Cognitive load in relation to non-standard language input: Insights from interpreting, translation and neuropsychology. Translation, Cognition & Behavior, 3(2), 263–286. https://doi.org/10.1075/tcb.00044.alb

Ehrensberger-Dow, M., Albl-Mikasa, M., Andermatt, K., Hunziker Heeb, A. & Lehr, C. (2020). Cognitive load in processing ELF: Translators, interpreters, and other multilinguals. Journal of English as a Lingua Franca 9(2), 217–238. https://doi.org/10.1515/jelf-2020-2039

D1.21

Contact: clint.iued@zhaw.ch

Principal investigator: Michaela Albl-Mikasa (ZHAW); Co-investigators: Maureen Ehrensberger-Dow (ZHAW); Lutz Jäncke (UZH)

ZHAW team members: Katrin Andermatt, Natalie Dietrich, Birgit Fuhrmann, Anne Catherine Gieshoff, Andrea Hunziker Heeb, Romina Schaub-Torsello, Martin Schuler, Romy Thommen

ZHAW Zurich University of Applied Sciences, School of Applied Linguistics, IUED Institute of Translation and Interpreting Theaterstrasse 15c, 8401 Winterthur, Switzerland, clint.iued@zhaw.ch, www.zhaw.ch/linguistics/iued/clint

Zurich Universities
of Applied Sciences and Arts

zhaw