

# Negotiating knowledge in cooperative learning scenarios

A multimodal approach to practices of computer-mediated and face-to-face communication in the university classroom

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## Research objectives and questions

**Background:** Applying and communicating knowledge are key competencies for academic and professional success. Practices of negotiating knowledge thus are important learning goals for students and a medium to acquire these competencies at the same time (Morek et al. 2017: 11).

**Main goal:** My study aims to add to our understanding of how students negotiate knowledge in **cooperative blended learning** (Bosch/Laubacher 2022) scenarios.

### Research questions:

- How do students make use of the potentials of FTF + CMC in a cooperative blended learning (CBL) scenario?
- How do students negotiate knowledge in peer-to-peer discussions, i.e. how do they practice and accomplish 'doing being a linguist' (cf. van Braak/Huiskes 2022: 'doing being an expert')?

## Task and methods

**Task:** Investigation and modeling of FTF and CMC practices of negotiating knowledge in a CBL scenario in higher education (university seminar in linguistics) that is designed to foster students' competencies in comprehending researchers' perspectives and approaches in linguistics papers and to improve their skills in discussing theoretical concepts derived from their readings.

### Methods:

- Interactional linguistics (Selting/Couper-Kuhlen 2000)
- Research on practices of negotiating knowledge in classroom discourse (see e.g. Morek et al. 2017) and 'digital practices' (see Androutsopoulos 2016, Beißwenger 2016)

## Data / corpus

**Data collection:** 2022 / 2023 in 3 linguistics seminars (BA + MA level)  
**Corpus in the wider sense** (Beißwenger/Lüngen 2022) – raw data from heterogeneous sources including:

- 37 collaboratively annotated academic papers and discussion threads with 756 postings from the Moodle activity type 'Textlabor' (665 initial posts, 91 follow-up posts)
- video recordings of 7 Zoom meetings (about 7.5h)
- 41 notepads/text documents from collaborative text editors (e.g. Etherpads, Google Docs)
- audio recordings of 11 peer-to-peer discussions in class (about 11h)
- 1 logfile of private text messaging and 2 threads from Moodle discussion boards
- metadata

## Negotiating knowledge

**Knowledge:** socially negotiated commodity, the result of agreements (Spitzmüller/Warneke 2011: 41)

**Practices of negotiating knowledge:** e.g. arguing, explaining (Morek et al. 2017)

**Jobs** (Quasthoff et al. 2022: 63), i.e. "conversational tasks participants are required to jointly deal with when accomplishing an explanation [...]:

- 1) Establishing topical relevance
- 2) Constituting an explanandum
- 3) Explicating procedural, conceptual or causal relation (core job)
- 4) Closing the explanation
- 5) Managing the transition to the subsequent turn-by-turn activity"

**Negotiating knowledge in the 'digital condition'** (Kultur der Digitalität, Stalder 2016): communicative practices are *mediatized* (Androutsopoulos 2016) → explanations in CBL scenarios are realized as mediatized practices

## 2. Students comment on and discuss the paper in small groups in discussion threads in the Moodle activity 'Textlabor'

The screenshot shows a Moodle discussion thread. On the left, there is a PDF viewer with a toolbar. On the right, there is a comment feature with several comments. The comments are from students like 'Frederike-ML-W22-T1', 'Kim-ML-W22-T1', 'Carina-ML-W22-T1', and 'Esma-ML-W22-T1'. The comments discuss the content of the PDF and the discussion thread.

Ex. 1: **Comment** in a Textlabor discussion thread on a figure in Auer (2000), November 23, 2022

**Kai-ML-W22-T2-L1:**  
Also ich kann das hier gar nicht gut nachvollziehen. Können wir da Freitag drüber reden? *I really can't comprehend this [figure]. Can we talk about that on Friday?* 0 likes, 0 replies

## Students use private messaging apps to organize their group work

Ex. 2: WhatsApp messages on November 25, 2022, prior to the Zoom meeting

**Antonio-ML-W22-T2-L1:**  
Meint ihr, wir sollten gemeinsam Absatz für Absatz im Meeting durchgehen [...] *Do you think we should discuss paragraph by paragraph in our meeting [...]*



1. Students read a paper individually and are provided with guiding questions and tasks for reading comprehension  
"e.g. Clarify the concepts 'projection' and 'retraction' (Auer 2000)"

5. Students obtain new insights and develop new ideas that form the basis for the following reading units and discussions

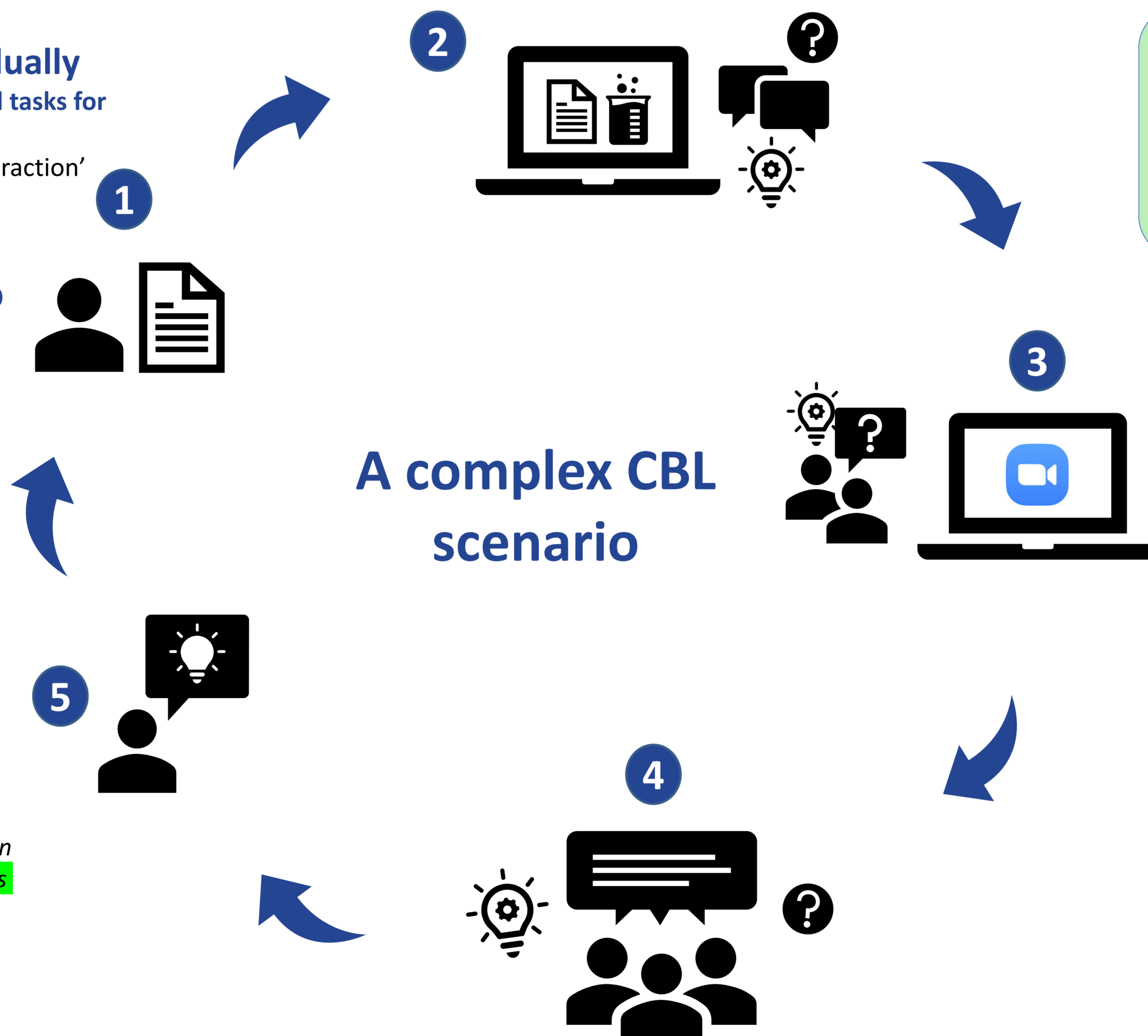
4. Students discuss their questions and thoughts regarding the reading assignment in class

Ex. 4: Peer-to-peer discussion in class on December 1, 2022:

**Carina-ML-W22-T1-L1:** [liest vor] klären sie die konzepte prOjektion und REtraktion [...] *[reads aloud] clarify the concepts projection and retraction [...]*

**Antonio-ML-W22-T2-L1:** eh (.) retraktion also ich muss sagen die projektion fand ich gar nicht schwer ich hatte ich hing so\_n bisschen muss ich gestehen bei der retraktion [...] *um (.) retraktion well i have to say i don't think projection is that difficult i had i was kind of struggling i have to admit with retraction [...]*

**Carina-ML-W22-T1-L1:** also rEtraktion [...] das sind ja konstruktionen die halt [...] *so retraktion [...] those are structures that you know [...]*



**Kai-ML-W22-T2-L1:**  
Vielleicht gucken wir uns erstmal an, was im Textlabor bearbeitet wurde und orientieren uns dann an den Aufgaben? [...] *finde besonders den Auer-Text echt schwierig... Maybe we should take a look at the comments in the Textlabor first and then focus on the assignments? [...] especially the text by Auer is really difficult...*

3. Students talk about the assignments and their questions in small groups via Zoom

Ex. 3: Zoom meeting two days after Kai-ML-W22-T2-L1 posted his comment, November 25, 2022

**Yali-PS-W22-T2-L1** shares her screen that shows Kai's Textlabor comment: so (---) das ist eh die frage (.) im zweiten text. *this is uh the question (.) in the second text.*

**Timo-ML-W22-T2-L1:** ACH ja (.) hm ja (.) also DIE grafik [...] (das war) also WIRKlich [kollektives Lachen] *oh right (.) um yeah (.) well THAT figure [...]* (that was) HONestly [students laugh collectively] [...]

**Yali-PS-W22-T2-L1:** ich kann das auch nicht verstehen (---) ehm (3.0) SCHWIERig (---) "h OH (.) d\_DAS ist ein [beispiel] von kombination also man s\_also der autor meinte in (dieser) äüßerung dann gibt es soWOHL projektion als auch retraktion [...] *i don't understand it either (---) um (3.0) DIFFicult (---) "h OH (.) th\_THAT is an [example] of combination so you s\_so the author meant that there is both projection and retraction in this utterance [...]*

## Challenges

**Dealing with ethical and GDPR issues and the observer's paradox:**

- Information on the project was provided prior to the data collection without expanding on the research questions in order to **avoid priming effects**.
- It was pointed out that participation in the data collection is voluntary and non-participation does not have any negative implications.
- The students gave **informed consent** by specifying which data types may or may not be collected (see Stukenbrock 2022: 313).
- Data were collected in a "natural", i.e. **non-experimental setting** by using nonobtrusive recording devices and, whenever possible, in my absence (see Stukenbrock 2022: 312).
- **Anonymization:** Personally identifiable information (PII) is anonymized: IDs (e.g. *Timo-ML-W22-T2-L1*) contain a **pseudonym** + generalized metainformation on the **study program, semester, student group** and **reading unit**.

## Next steps

- Transcription of (multimodal) data
- Dealing with issues of representing and analyzing (multimodal) corpora with heterogeneous data types
- Coding the data for different CMC and FTF practices (and communicative jobs) of negotiating knowledge in the university classroom
- (Prospectively) conducting interviews

## References

Androutsopoulos, J. (2016). Mediatisierte Praktiken: Zur Rekontextualisierung von Anschlusskommunikation in den Sozialen Medien. In A. Deppermann, H. Feilke & A. Linke (Eds.), Sprachliche und kommunikative Praktiken (pp. 337-367). Berlin, Boston: de Gruyter. • **Beißwenger, M.** (2016). Praktiken in der internetbasierten Kommunikation. In A. Deppermann, H. Feilke & A. Linke (Eds.), Sprachliche und kommunikative Praktiken (pp. 279-310). Berlin, New York: de Gruyter. • **Beißwenger, M.; Lüngen, H.** (2022). Korpora internetbasierter Kommunikation. In M. Beißwenger, L. Lemnitzer & C. Müller-Spitzer (Eds.), *Forschen in der Linguistik. Eine Methodeneinführung für das Germanistik-Studium* (pp. 431-448). Paderborn: Brill|Fink. • **Bosch, C.; Laubscher, D. J.** (2022). Promoting Self-Directed Learning as Learning Presence through Cooperative Blended Learning. In *International Journal of Learning, Teaching and Educational Research* 21 (9) (pp. 17-34). • **Morek, M.; Heller, V.; Quasthoff, U.** (2017). Erklären und Argumentieren. Modellierungen und empirische Befunde zu Strukturen und Varianzen. In I. Meißner, E. L. Wyss (Eds.), *Begründen – Erklären – Argumentieren. Konzepte und Modellierungen in der Angewandten Linguistik* (pp. 11-45). Tübingen: Stauffenburg. • **Quasthoff, U.; Heller, V.; Prediger, S.; Erath, K.** (2022). Learning in and through classroom interaction: On the convergence of language and content learning opportunities in subject-matter learning. In *EJAL* 10(1) (pp. 57-85). • **Selting, M.; Couper-Kuhlen, E.** (2000). Argumente für die Entwicklung einer 'interaktionalen Linguistik'. In *Gesprächsforschung - Online-Zeitschrift zur verbalen Interaktion* (1) (pp. 76-95). • **Spitzmüller, J.; Warnke, I. H.** (2011). Diskurslinguistik. Eine Einführung in Theorien und Methoden der transtextuellen Sprachanalyse. Berlin/Boston: de Gruyter. • **Stalder, F.** (2019). *Kultur der Digitalität*. Berlin: Suhrkamp. • **Stukenbrock, A.** (2022). Audio- und Videographie. In M. Beißwenger, L. Lemnitzer & C. Müller-Spitzer (Eds.), *Forschen in der Linguistik. Eine Methodeneinführung für das Germanistik-Studium* (pp. 307-323). Paderborn: Brill|Fink (= UTB 5711). • **Van Braak, M.; Huiskes, M.** (2022). 'Doing being an expert': A conversation analysis of expertise enactments in experience discussions in medical education. In *Linguistics and Education* (69/101052) (pp. 1-15).

My academic website

