



Prof. Dr. Karl Schneider and Nils Eingrüber, University of Cologne / Germany  
Prof. Dr. Christina Bogner, University of Cologne / Germany  
Prof. Dr. Shamita Kumar, Bharati Vidyapeeth Deemed University, Pune / India  
Prof. Dr. Sekhar Muddu, Indian Institute of Science, Bangalore / India



## Motivation

- Collaborative Online International Learning (COIL)
- Continuous cooperation beyond short term visits
- Sustainable internationalization beyond mobility
- Distant and outdoors tutoring
- Interdisciplinary cooperation
- Integration of live discourse and self paced learning

## Teaching modes and research

- Self paced preparation by online lectures
- International cooperation of students in class, from home and in the field
- Hybrid mode discourse meetings
- Individual and / or collaborative research
- Focus on environmental and sustainability education

## The International Digital Education and Learning (IDEaL) Platform

The IDEaL platform process flow is as follows:

- Organization:** ILIAS course structure
- Preparation:** NEARPOD self paced lectures
- Activation:** NEARPOD Apps
- Cooperation:** Mixed student teams
- Discourse:** Weekly zoom meetings of all students
- Outdoor experience:** XpertEye
- Research:** Term papers, Theses

Currently 4 different classes available in IDEaL:

- Unit 0: Extra
- Unit 1: Live
- Unit 2: Live
- Unit 3: Live
- Unit 4: Online-Lecture

Collection of protocol based observation apps:

- Bodenart bestimmen
- Pflanzenphenologie - Plant Phenology

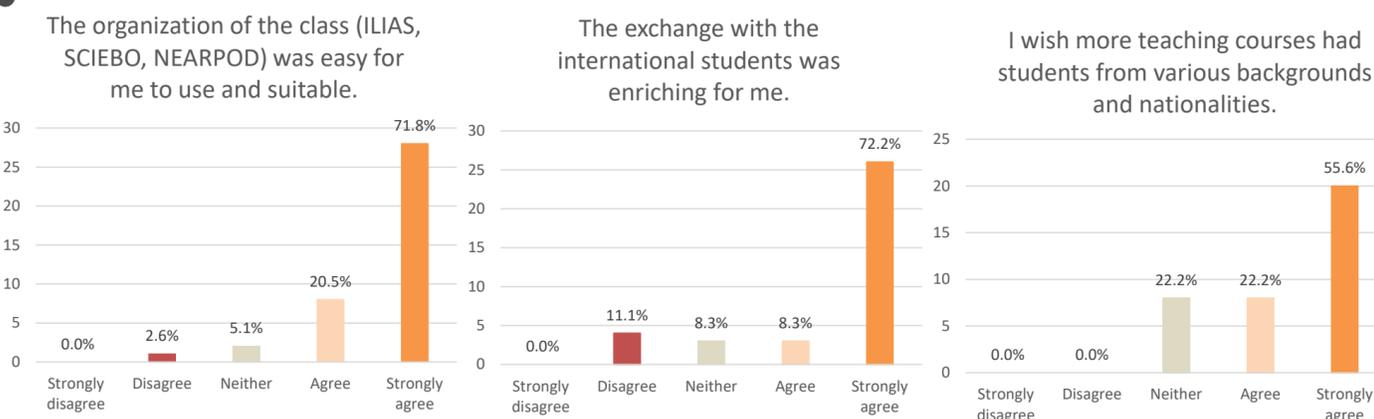
Collaborative Online International Learning (COIL) interface showing a Zoom meeting with participants from various countries.

Augmented reality (AR) application: XpertEye, used for field observations.

Urban Energy and Radiation Balance research project: Group 3: Charlotte Krekler, Nilesh Gare, Ajay Mulak, Jule Ingenfeld, Marie Scholz. Seminar: Urban Climatology - Basic Concepts and Microclimatological Modelling with ENVI-met Winter term 2022/23.

For more info see: <https://uni.koeln/RBXLf>

## Evaluation



45 questions were asked pertaining to organization, technology used and internationalization/interdisciplinary cooperation. Overall the organizational aspects (17 questions) of the class received good (27%) to very good (62%) grades (n=39). The internationalization aspects (8 questions) received good (19%) to very good (63%) grades (n=36).

## Adaptability and Future Perspectives

- Additional classes are planned
- Contributions of additional disciplines and partners are possible
- Courses are easy repeatable since courses materials and teaching units are prepared online
- Audios can be easily updated using transcription and reading software
- Translation to different languages is possible
- Suitable for Joint or Dual Degree programs
- Joint Research Programs

**Testimonials of participants**

- "The concepts of this class are very nice due to the various learning approaches and especially the NEARPOD tutorials. It was also the course where I have learned the most in my entire studies so far."
- "The exchange with the Indian students motivated me and it is a good idea to develop our own research project with an Indian partner."
- "I liked the fact that the internationality groups were created for group assignments as they allowed me to interact and learn from my peers from a different background."