C.3 Towards a consulting guideline for Capacity Building in COIL modules

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1 Introduction

Today's higher education and labor market necessitate strong collaboration and digital competencies (Aepli et al., 2017; Jadin, 2018). Thus, designing effective learning modules for these skills is paramount to preparing graduates for their career paths. However, constructing these modules poses a complex task, demanding a deep understanding of the required skills and expert guidance for module efficacy (Rauer et al., 2021; Vuchkovski et al., 2023).

This paper focuses on studying and developing Collaborative Online International Learning (COIL) module guidelines. COIL is an innovative educational approach that promotes cultural diversity integration and global collaboration in higher education. It enhances intercultural competencies and digital skills through virtual student collaboration guided by experienced teachers (Appiah-Kubi & Annan, 2020). The primary goal of COIL modules is to empower learners to creatively and responsibly use digital technologies for information gathering, communication, content creation, well-being, and problem-solving (Hanna, 2019; Redecker, 2017).

Currently, there is a capacity deficit in terms of COIL modules in the Western Balkans region. To overcome this deficit, using experts who can advise and assist in creating these modules is crucial.

In line with the objective of this work, the developed guidelines or recommendations for action will be applied to 2-3 pilot projects in the Balkan region to support experts in successfully creating and implementing COIL modules. These guidelines will serve as a valuable resource to promote the effective integration of COIL in higher education and ultimately strengthen students' collaborative skills and digital competencies.

2 Methods

To develop practice-oriented recommendations for COIL modules for non-experts, interviews were conducted with German teachers and university staff from Balkan countries. The research methodology used will be further explained below.

2.1 Participants

The interviews included three participants from the Balkan region who are assistant professors at the Faculty of Economics and an International Relations Coordinator representing different higher education institutions (HEIs). Additionally, three staff members from the Department of Information Management at the Dresden University

of Technology were interviewed (see Table 1). The German participants had prior experience with COIL projects, while the participants from Bosnia and Herzegovina did not yet have any experience with international collaborative online courses.

Table 1: Information about the participants of the interviews

Participants	Reference in Text	University	Faculty or function at university
Experte_1	E1	College of Business in Pristina	International Relations Coordinator
Experte_2	E2	Technical University of Dresden	Research assistant at the Faculty of Information Management
Experte_3	E3	International Burch University	Assistant Professor at the Faculty of Economics
Experte_4	E4	University of East Sarajevo	Senior Teaching Assistant at the Faculty of Business Economics
Experte_5	E5	Technical University of Dresden	Research assistant at the Faculty of Information Management
Experte_6	E6	Technical University of Dresden	Research assistant at the Faculty of Information Management

2.2 Data Collection

Between April 24 to May 12, 2023, semi-structured online interviews were conducted via Microsoft Teams, chosen for the platform‘s accessibility and transcription capabilities. These interviews, lasting between 55 to 80 minutes, were individual and recorded with participant consent. Open-ended questions were used in the interview guide, allowing university staff to freely express their thoughts, experiences, and perspectives and provide additional contextual feedback without limiting them with predetermined answer options (Adams, 2015, pp. 492–493; Berger-Grabner, 2016, p. 181). This type of empirical research is particularly necessary as there is only marginal research in this area. The interview guide was based on Berger-Grabner‘s (2016) framework of semi-structured interviews for comparability across interviews on the research topic, enabling a comprehensive reconstruction of the expert‘s knowledge and experiences (Berger-Grabner, 2016, p. 142).

As the participants were experienced and inexperienced university staff in dealing with Virtual Collaborative Learning (VCL) projects, two different questionnaires were developed to consider their expertise. Both groups were asked about four topic categories: Technical Platform, E-Tutoring, Case Study/Task, and Collaborative Online International Learning, corresponding to the Virtual Collaborative Learning Framework (Schoop et al., 2020, p. 3). Learning analysis was excluded as the study aimed to develop construction and support recommendations for non-experts (Figure 1).

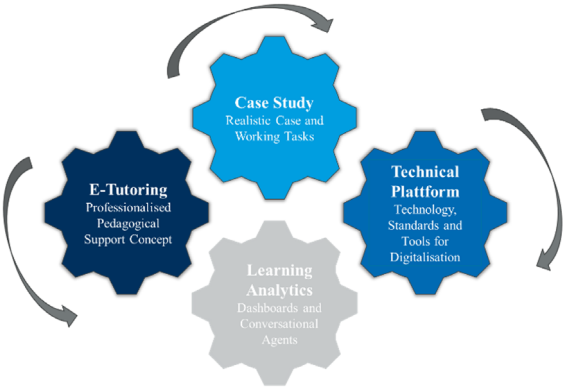

Figure 1: Main parts of the virtual collaborative learning framework and interview guide

An initial interview with a non-expert provided insights into the previously mentioned four main categories. The interview responses were used to create an interview guide for experts, focusing on the challenges faced by inexperienced participants in implementing COIL projects. The initial guide versions had ambiguous and imprecise statements. We revised and rephrased these queries to enhance focus and accuracy, refining the guide through an iterative process. This optimization led to more focused and informative participant responses.

2.3 Data Evaluation

The data from the interviews were analyzed using a combined approach of qualitative content analysis using inductive and deductive categorization, according to Mayring (2014), to carry out a comprehensive and systematic data analysis. The computer-assisted data analysis software MAXQDA was used for the analysis. The codes are based on the four main categories of the interview guide (Figure 2).

Codesystem	**579**
Collaborative Online International Learning	186
Technical platform	163
E-Tutoring	114
Case Study and tasks	116

Figure 2: Overview of the code system of the main categories

The subcodes were assigned according to the qualitative data collected.

3 Results

The interview results are divided into four parts based on the interview guide. Table 2 provides an overview of the key points.

The evaluation of the interviews highlights key considerations for undertaking a **COIL** project. Participants should be aware that a preparation period of 6-12 months may be necessary, depending on the partners‘ experience (E5, E6). This period should address challenges such as e-tutor training, potential language barriers, varying semester durations, and higher education legislation, requiring coordination among all partners (E1, E2, E3, E4).

To ensure successful implementation, maintaining a 1:2 ratio of experienced to inexperienced faculty participants is recommended (E5, E6). Comprehensive training materials in the form of documents, short videos, and practical workshops should cover COIL, the technical platform, e-tutoring, and case study development (E2, E5, E6). Having experienced participants available as contact persons from the beginning is also important for guidance and support (E3, E4, E6).

Assessment procedures, expected results, and expectations should be documented in a learning agreement agreed upon by project partners (E2, E5). Inexperienced partners can gain insight into ongoing COIL projects through job shadowing, developing a basic understanding of the process (E6).

To ensure sufficient e-tutors throughout the project, training more than immediately required is recommended, considering potential availability changes (E6). A seamless transition from preparation to implementation is crucial to maintaining a qualified e-tutor pool (E6). The implementation phase, lasting approximately six weeks, involves working on assigned tasks (E6) while maintaining a balanced ratio of participating students and relying on experienced participants as motivators and contacts.

Various approaches can foster participant motivation, including push factors like assessments or funding and pull factors such as benefits and incentives (E3, E4, E5, E6). Certificates serve as a motivating factor, providing practical learning opportunities, enhancing self-organization skills, developing virtual competencies, promoting intercultural exchange and networking, and gaining international experience at a low cost (E2, E3, E4, E5, E6). Participating HEIs also benefit from improved reputation, international experience, and contact-building opportunities (E2, E4, E5, E6), further contributing to motivation.

When implementing a COIL project, choosing a suitable **technical platform** is crucial. It should be an all-in-one solution that meets specific criteria for effective online collaboration (E6). These criteria include transcription and subtitling capabilities, plug-ins, cloud functionality, seamless integration of apps, global accessibility, collaborative document sharing, diverse communication options, and data analysis tools (E2, E3, E4, E5, E6). Data analytics tools are essential for

assessing collaboration based on predefined metrics (E2). Experienced interviewees acknowledged the significance of these criteria, while inexperienced participants encountered platforms that often did not meet them (E1, E2, E3, E4, E5, E6). The lack of platform standardization and communication guidelines for online modules contributed to this issue. To convince non-experts of the platform‘s advantages, experts should share their experiences from other COIL projects and stress the importance of platform selection (E2, E6). One expert suggested collaboration with the same platform during the preparation phase to familiarize teachers and students with it (E6). The platform decision should be made collaboratively (E6).
Considering the financial aspect, the licensing cost for students should be considered, especially in regions with limited financial resources like the Balkans (E1, E3). Cost considerations were raised by both inexperienced participants (E3) and non-experts (E1). Experts should highlight that although open-source platforms may seem attractive initially, they can become more costly in the long run due to extensive setup requirements (E6). Emphasizing the use of platforms with licensing options for students (E2, E6) ensures long-term sustainability and financial feasibility.
To enhance training effectiveness in COIL projects, it is recommended to go beyond verbal persuasion and asynchronous materials. Synchronous training, such as hands-on workshops, is advised to facilitate learning by doing and providing practical demonstrations of data analysis tools (E2, E5, E6). Conducting a pre-test to assess participants‘ knowledge and familiarity with the platform helps tailor the workshop to their needs (E6). This customized approach ensures the training benefits all participants (E1, E3, E4, E6).
Data protection is crucial in COIL projects (E2, E5, E6). The chosen platform should guarantee data security, and it is essential to analyze the data protection guidelines of the partner country in advance (E2, E6). Involving a data protection officer at the university can be beneficial (E5, E6). Furthermore, it should be emphasized that explicit consent from students is necessary when using collected data for research purposes, such as with data analysis tools (E2, E6).

To ensure effective **e-tutoring** in COIL projects, several recommendations should be followed. Sufficient availability of e-tutors is crucial, and a backup plan should be in place to address any shortages at the project‘s start (E5). Training for e-tutors should be scheduled close to the module‘s start to minimize gaps and turnover (E6). Early involvement of e-tutors in module planning promotes transparent communication and boosts their motivation (E6). Differentiating the number of supervised groups based on e-tutors‘ experience is important, with experienced e-tutors handling 3-6 groups and less experienced ones controlling a maximum of 3 groups (E2). This aligns with the preference of inexperienced participants for about 10 participants per e-tutor (E3, E4). Thorough planning and coordination are key to successful e-tutoring (E2, E5, E6).

To attract e-tutors, individual incentives such as granting credit points, issuing certificates, or providing financial incentives like a student assistant position should be considered (E2, E5, E6). Recruiting former COIL module participants as e-tutors is also recommended (E6). During the recruitment process, effectively communicating the advantages and opportunities, such as gaining international experience and clearly defining the role of an e-tutor, is essential (E2, E6). Testimonials from current e-tutors can be valuable in attracting new e-tutors (E2).
E-tutors in COIL projects should possess specific qualities and skills, including reliability, digital literacy, effective time and self-management, availability during tutoring sessions, problem-solving, and conflict resolution abilities, critical thinking, strong communication skills, empathy, and assertiveness (E3, E4, E5, E6). Utilizing advanced students as e-tutors is common due to their relevant experience and skills (E2, E3). Clear and transparent communication among partners regarding the required qualifications for e-tutors is crucial for consistency in the selection process. Offering country-specific training for e-tutors while maintaining uniform essential contents agreed upon among partners is recommended. Institutional training for e-tutors is advantageous as it builds internal capacity and reduces dependence on external partners (E6). The training should cover virtual communication, conflict management, virtual feedback, and social media usage. Incorporating expert-provided content into the training, such as brochures, lectures, or presentations, is beneficial (E6). Practical workshops should be included to allow participants to apply their knowledge (E6).
Transparent communication and comprehensive evaluation involving all stakeholders are vital in COIL projects. Establishing good communication channels and conducting regular online meetings involving all e-tutors and project leaders facilitate effective communication (E3, E5, E6). Including all partners and e-tutors in communication is crucial (E6). After the tutoring phase, a final evaluation allows for learning from mistakes and reflecting on the project‘s outcomes (E5). Setting clear expectations and requirements in advance helps prevent misunderstandings (E5, E6). Emphasizing the significance of e-tutors‘ work fosters their understanding of their role‘s importance (E5). Mutual trust among partners is the goal in providing e-tutors and meeting project requirements (E5).
When inexperienced interviewees are assigned to create case studies and tasks for a COIL project, several recommendations should be followed to ensure a successful and engaging learning experience. It is crucial to have a clear understanding of the participating students and a balanced mix of study fields, as excessive interdisciplinarity can pose challenges (E5). Experts recommend choosing practice-oriented topics related to current trends like the environment or sustainability (E2, E5, E6).
Encouraging students‘ creativity, emphasizing cooperative collaboration and problem-solving, and following country-specific guidelines are important when designing project tasks (E5, E6). Ensuring students have access to necessary information sources is also essential.

Involving all participants in the decision-making process, collaborating with experienced teachers, and providing training or workshops with pedagogical samples and best practice examples from previous COIL projects can facilitate effective task development (E2, E5, E6). Creating an understanding among non-experienced partners regarding case study development is crucial (E2, E5, E6).

Table 2: Guidelines for the implementation of COIL projects at unexperienced HEIs

Collaborative Online International Learning

- Procedure: Preparation, implementation and evaluation phases
- Preparation time: 6-12 month
- Project execution time: approximately 6 weeks
- Balanced ration of participating students at 50:50
- Maximum of two inexperienced practice partners to one experienced practice partner conducting COIL projects
- Job shadowing[1] / pilot phase for inexperienced project partners
- Experienced participants are available as contacts for inexperienced institutions throughout the entire implementation phase and duration of the project
- Trainings/ information materials on COIL, technical platforms, e-tutoring, and case study elaboration should be conducted and provided by experts
- Country-specific higher education legislation of the participants should be considered
- Challenges: possible language barrier, participant motivation, different organizational circumstances such as semester duration, and the challenge of dealing with the technical interface
- Learning Agreement with common goals and framework conditions (examination procedures, access restrictions) should be determined at the beginning of the project

Technical Platform

- Provision of licenses
- The platform should meet certain criteria
- Conduct a pretest on knowledge/handling of digital platforms with non-experts
- Consider data protection

E-Tutoring

- Ensuring necessary number and availability of e-tutors
- Acquisition of e-tutors through individual incentives
- E-tutors must meet specific requirements
- Country-specific training, but content is uniform for all participants
- Transparent communication and final evaluation with all interfaces

Case Study and Tasks

- Students' field of study must be known in advance
- Find a practice-oriented trend topic
- Create creative task assignments & consider country-specific conditions

Benefits for Students

- Practical form of learning
- Self-organization
- Virtual competencies
- Interculture exchange and networking with minimal monetary expenditure
- High number of participants

Benefits for Universities

- Reputation
- International experience and contracts
- Virtual Mobility offers
- 21st Century Skills

[1] The non-expert participates in a project led by an expert but does not take on an active role.

4 Discussion

This chapter provides possible implications, limitations, and recommendations for future research based on the data collected.

4.1 Implication

The interview responses show that HEIs in the Balkan region should implement reforms aligned with international guidelines and digital approaches to facilitate COIL project implementation. The Ministry of Education should establish foundations to promote digital infrastructure development, ensure funding for necessary resources like software licenses, and accredit such projects to facilitate cooperation with national and international partners in higher education.

Non-experts also recognize the benefits of COIL projects, including cultural knowledge acquisition, international contacts, and the development of critical 21st-century skills. However, faculty need better preparation and training to leverage COIL projects fully. Standardizing platforms, tools, and clear guidelines for student communication practices are necessary.

When expectations are met, COIL projects bring opportunities for students and an improved reputation to HEIs in the Balkan region. Therefore, the issue of COIL needs to be discussed and given more attention in higher education by national authorities and academic staff which is also supported by the capacity building theory where local actors are change drivers (Nickel & Trojan, 2020).

4.2 Limitations and Required Research

The study has limitations in terms of the sample composition and language barriers. The small sample size of three German university employees and three employees of universities in Bosnia and Herzegovina restricts generalizing the recommendations for non-experts in COIL modules. Including additional interviews, partners could potentially change the results due to cross-university differences and experiences. Language differences may have caused comprehension problems and misinterpretation of complex ideas during the interviews. Translation services and extra time could be considered to address these challenges. Despite the limitations, the study provides a good starting point for initial results.

Further testing, validation, and refinement of recommendations through practical implementation in COIL projects are necessary. This iterative process will enable comprehensive evaluation and improvement of guidelines for non-experts in different project contexts and participant groups. Continuous testing and expansion of the findings will contribute to the ongoing development of COIL project guidelines for non-experts.

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