Chapter Three

Unleash the Potential of Virtual Collaborative Learning: A Guide for Implementation

Mattis Altmann
Dresden University of Technology, Germany
mattis.altmann@tu-dresden.de

Sophie Cool
Dresden University of Technology, Germany
sophie.cool@tu-dresden.de

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Introduction

Alongside the digitalisation of higher education, internationalisation is also becoming increasingly important. After completing their degree, more students will take it naturally to work in a digitally networked, interdisciplinary, and international team, regardless of their field (Chang & Gomes, 2022; Uduafemhe et al., 2023). Nevertheless, digitalisation and internationalisation are complex processes requiring careful planning and preparation time. In addition to teachers, students should also be prepared for the teaching format. Institutional support is also required to ensure the success of the teaching module.

The Erasmus+ projects VALEU-X and its successor COWEB, which aim to implement Virtual Collaborative Learning in the Western Balkans region, serve as an example. The completed VALEU-X project focused on six Albanian universities. Initially, it concentrated on training the academic and administrative staff to subsequently test the VCL framework locally in a two-stage pilot phase and then implement an international VCL module with 10 European partner universities. The COWEB project that followed rolled out the concept to other partner countries in the Western Balkans (Montenegro, Kosovo, Bosnia & Herzegovina) and Albania. In addition, an intermediate stage was introduced in the piloting, which prepares the participating partner uni-

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versities even better for implementing the international VCL module.

This article takes a step-by-step look at implementing virtual collaborative learning and provides practical recommendations for implementation. Starting with creating ideal conditions for implementation at the administrative and institutional levels, the article then deals with the preparations at the administrative and content levels. This is followed by a closer look at the actual implementation and a brief discussion of the tasks after completing the course.

Building VCL Scenarios

Preconditions on the Administrative and Institutional Level

Bottom-Up Or Top-Down Implementation

Due to the still-young history of Virtual Exchange and only a few available studies that have empirically examined the programs' success, motivated teachers often implement these programs according to the bottom-up principle. However, this means that it is rarely possible to anchor the program at an institutional level, so that the implementation depends on individual committed individuals and can hardly take on a formal character (Rubin & Guth, 2015). It is, therefore, advisable to proceed according to the top-down principle for sustainable implementation and involve all participating institutions' bodies from the outset.

Readiness for Virtual Exchange

A framework for Virtual Exchange programs must first be created at the administrative level. The objectives and the expected outcome of the Virtual Exchange should be defined. For example, the aim may be to improve students' global competencies or language skills. It is also advisable to expose students to different cultural perspectives (O'Dowd, 2018, 2019). Furthermore, logistical aspects such as the selection of partner institutions, the available technical platforms used for the virtual exchange, and the available resources should be examined (Giralt et al., 2022). Key stakeholders for the Virtual Exchange program should be identified as those involved in the planning and implementation. This includes faculty members who design the curriculum and track the achievement of learning objectives (Weaver et al., 2022). It is important to ensure the ongoing support of the academic staff and students by the administrative staff and to provide the necessary infrastructure (Whatley et al., 2022).

Establishment of Partnerships

Building partnerships with international institutions is necessary for the long-term success of virtual exchange programs. Careful selection should be made of partners pursuing similar educational goals and values. Formal agreements can be used to create these partnerships, outlining the participating institutions' intentions and responsibilities and describing the nature of the collaboration. Further components can also be the learning outcomes of the students (Giralt et al., 2022). Examples of agreements are a Letter of Interest (LOI) or a Memorandum of Understanding (MOU).

Preparation

The Preparation Phase itself can again be divided into two parts: the content level preparations and the administrative level preparations. This phase focuses on establishing the framework conditions with all partners and developing a common course outline collaboratively. It addresses eight key components that must be thoroughly discussed and agreed upon with all stakeholders. These components are interdependent, meaning that the sequence of discussions may vary and might not follow a linear progression. However, ensuring that all points are comprehensively covered is crucial to laying a solid foundation for the project. Once the course contents have been established, the training phase can begin. In this phase, all involved staff are trained and prepared for their respective roles in the course.

Administrative Level Preparations

Integrating into the curriculum is crucial for successfully planning for Virtual Collaborative Learning. A suitable module should be selected that enables collaboration on a project basis. It is unnecessary to create a new module if an existing one offers the possibility of integration or adaptation. The module's learning objectives should also be adapted and supplemented with interdisciplinary and collaborative cooperation (Altmann et al., 2024). Furthermore, social learning theories such as constructivism and Connectivism can foster student engagement and enhance their competencies to work in international teams (O'Dowd et al., 2019).

In the next step, *administrative and academic staff* training should be planned. These should focus on integrating technology, intercultural

awareness, and new pedagogical methods in Virtual Exchange. Particular attention should be paid to the complexity of virtual exchange to prepare those involved and thus enable them to navigate safely through the module (O'Dowd et al., 2019).

In addition to academic staff, *students should also be prepared for virtual exchange,* particularly concerning their technological and intercultural skills. According to research by Gutiérrez et al. (2022), students often lack effective communication strategies in virtual environments. For this reason, a training program should be established for students covering digital literacy, critical thinking skills, and conflict resolution. Ideally, this training should start before the start of the virtual module. Furthermore, an exchange on the cultural and social norms standard in the countries involved in the exchange is also recommended to enable a respectful and culturally valuable exchange.

As the main point of contact for students in VCL modules, intensive *preparation of e-tutors* should occur. This can be done, for example, through a preceding qualification module. The focus here is on communication in virtual space and the unique features of virtual collaboration, conflict resolution, and navigating safely through virtual collaborative learning modules. Furthermore, supporting the student's learning process is one of the central tasks of the e-tutors. They bridge the gap between students and teachers and are students' first point of contact when organising the learning process. Special sensitisation for this task is highly recommended (Altmann et al., 2024).

Rules and standards for communication should also be defined within the framework of international cooperation. This can prevent misunderstandings and promote respectful interaction on the learning platform. Due to the absence of non-verbal clues in virtual space, there is a higher potential for miscommunication (Peng & Derain, 2022). Initially, representatives of all participating institutions should agree on a common framework. This should then be used to sensitise both the e-tutors and the students, for example, by integrating it into the training courses described above.

The legal framework is of particular importance in international cooperation. Depending on the partner structure, special requirements must be observed here. Such barriers are not uncommon in the target region of the COWEB project, the Western Balkans. This is illustrated by the example of Albania and the study by Miço and Zaçellari (2020), who describe the legal framework for digital learning as fragmented

and marginally implemented. In particular, the unclear description of the requirements leaves the concrete design open and creates uncertainty among teachers and institutions. According to practical experience in the COWEB and VALEU-X project context, compulsory student attendance is still the state of the art in Albania. This situation can only be countered by concrete measures (such as virtual collaboration during physical presence at the university). Therefore, an assessment and consideration of the legal situation in the respective partner countries is essential for the successful implementation of Virtual Collaborative Learning.

Finally, the sustainability of administrative expenses should be ensured. *Establishing a community of practice* that connects the relevant stakeholders and enables collaborative work with a low barrier to entry is essential. This can stimulate the exchange of knowledge between participants and develop joint strategies for overcoming problems in the context of virtual exchange (Whatley et al., 2022)

Content Level Preparations

The first component involves determining *which disciplines will be involved* in the course. VCL offers the opportunity to integrate multiple fields of study into group settings (Clauss et al., 2020). A key consideration is identifying disciplines that can work symbiotically on a shared topic, fostering interdisciplinary collaboration. This process may be more straightforward when the disciplines are closely related or within the same field of study, though the final decision often depends on the individual preferences of the participating partners.

The second component of the coordination phase consists of determining the *program duration.* Several factors must be considered in this decision, including the length of each semester, how the semesters align across participating institutions, and any institutional restrictions on the duration of project work.

The next component involves agreeing on *the total number of participants* and the *group size* for the course. It is important to assess the available resources, including staff and e-tutors, for the total number of participants to understand how many can be realistically supported. Additionally, the expected level of interest in the course must be evaluated to estimate potential sign-ups accurately. When deciding on group size, considerations include the number of disciplines involved and the complexity of the tasks. Research suggests a group size of four

to six participants is ideal for fostering effective collaboration and ensuring manageability (Schoop et al., 2024).

Component four focuses on defining the *key participant demographics*. This involves deciding the desired level of study or expertise for the course, such as whether participants should be bachelor's or master's students or if they are expected to have specific foundational knowledge from other modules. Additionally, it is important to determine which fields of study and specializations are most relevant for the course, ensuring that participants possess the necessary background to engage effectively with the course content and objectives.

The *selection of technology* is another crucial component of the coordination phase, as it defines the platform students will use for interaction and collaboration. The chosen learning platform must fulfil several requirements for a practical and seamless learning experience. It should provide a reliable e-learning environment or collaborative platform that is affordable, regularly maintained, and accessible on both computers and mobile devices. Additionally, it must support a wide range of functionalities, such as digital communication tools for synchronous interactions, like video or voice calls, and asynchronous exchanges, such as forums, blogs, and chats. Coordinative features, including task assignments, calendars, and checklists, should also be available alongside collaborative tools for shared documents, spreadsheets, and presentations (Altmann et al., 2024). The platform should facilitate notifications and a common storage area for learning materials. Furthermore, it should also incorporate tools for social learning analytics to analyse student interactions, providing continuous monitoring and documentation of each group's progress objectively to support summative and formative assessments and feedback (Altmann et al., 2024).

The sixth component consists of determining how participants will be *accredited for their work* in the course. Providing academic credentials is key to motivating participants and ensuring the program's success. In this context, offering ECTS accreditation is particularly important, as it formally recognises the participants' efforts and aligns the course with standard academic frameworks (Tereseviciene et al., 2011).

Component number seven focuses on *designing the actual case study*. This involves three key aspects: defining the general framework, developing the content, and structuring the workflow. First, the learning goals must be clearly defined to ensure alignment with the course's edu-

cational objectives. Second, the content of the case study must be carefully crafted. This includes selecting an engaging and relevant topic, developing a compelling cover story to provide context, and designing tasks that challenge participants while aligning with the learning goals. Third, the structure of the case study must be established, encompassing the assignment of roles, the length of the working phases, and clear deadlines.

Lastly, the eighth component establishes a *common evaluation strategy,* focusing on formative assessment. This step requires defining how various contributions will be evaluated and how much they impact the overall assessment. It is important to balance group and individual assessments to ensure fairness and accurately reflect each participant's efforts and contributions. The evaluation strategy must also specify the metrics that will be used to assess performance. These metrics could include the quality of results, the group collaboration level, individual engagement, and the achievement of the predefined learning goals.

Doing

After completing both preparation phases, the VCL can start. Once the students have enrolled in the course and have been divided into groups, they can start *working on the case study* developed during the course preparation. While the VCL is running, *adequate supervision* is crucial to ensure students remain on track and fully supported throughout their work. Supervisors, including academic staff and e-tutors, must actively monitor group progress, provide timely feedback, and address any challenges students face. *Conflict management* is key to facilitating a smooth VCL experience, particularly when addressing intercultural differences, variations in working styles, or potential dropouts. E-tutors must be equipped to manage disputes constructively, promoting mutual understanding and resolving issues to support group dynamics. Proactive measures like *regular check-ins* and conflict resolution strategies can help mitigate these challenges and ensure a positive learning environment. *Regular communication and coordination between institutional partners* are also essential during the VCL. This involves consulting on progress, addressing emerging issues, and adjusting the course.

Maintaining this close co-working relationship fosters consistency across institutions, aligns expectations, and ensures that the course objectives are met collaboratively.

Post-Doing

After completing the module, the *assessment* should be started first. Both formative and summative elements of the VCL module should be considered. Before the module begins, the distribution of the assessment between the partners should be clarified, and a common assessment standard should be defined. The elements to be assessed should also be taken into account. Finally, all involved should agree on the grades to avoid misunderstandings. If the modules available at the respective partner institutions have different ECTS or study credit point requirements, consideration should be given to a supplementary assessment at the local level (for two partners) or a general supplementary assessment for several partners.

Once the VCL module has been successfully piloted, the next step should be to consider *accreditation.* Giralt et al. (2022) state that accreditation improves the learning experience and simplifies future international exchange. It also simplifies the recognition of student performance, which students receive in the form of ECTS, or study credit points, by participating in the module. Finally, this also promotes greater student engagement in international modules, thus the university's international offering.

Furthermore, student *reflection* after completing the VCL module is a valuable addition. On the one hand, students can gain a deeper understanding of the skills they have acquired, especially intercultural competence. On the other hand, the student reflections can be used to collect data, which, once analysed, enables a goal-oriented improvement of the VCL modules. The reflections can be implemented in the form of written, fully standardised interviews and through focus group discussions or essays.

Finally, after successfully implementing the VCL module, the *sustainable use of the established partnership* should be sought. In addition to the accreditation of the VCL modules, it is also advisable to strive for a strategic partnership between the participating institutions, thus significantly broadening the range of international courses offered by the respective partner institutions (Enkthur et al., 2024).

Recommended Schedule

To successfully implement a VCL module, it is advisable to divide the implementation schedule into new and existing partnerships. In the case of a new partnership, particular attention should be paid to the

TABLE 3.1 Recommended Schedule for VCL Implementation

1–3 months	*Pre-conditions*	• Top-down or bottom up • Readiness for virtual exchange • Establishment of partnership	Timespan for new VCL collaboration
2 months	*Preparations: Administrative-level*	• Integration in curriculum • Staff trainings • Student trainings • Qualification of e-tutors • Rules for communication • Legal framework • Community of practice	Timespan for established VCL collaboration
2–3 months	*Preparations: Module-level*	• Disciplines • Program duration • Participant number and group size • Key participant demographics • Selection of technology • Secure/agree on accreditation • Case study design • Evaluation strategy	
1–2 months	*Doing*	• Student supervision • Conflict management • Coordination with partners	
1–2 months	*Post-doing*	• Assessment • Accreditation • Reflection • Ensure sustainability	

first phase to create the prerequisites. The planning time for this phase should be at least one month, but experience has shown that it tends to take longer. Preparations should then be made at the administrative and module levels. As the administrative preparations partly serve as a prerequisite for carrying out the preparations at the module level, these phases can only be completed in parallel to a limited extent. There is a more significant potential for shortening this if a VCL cooperation already exists, as academic staff is already trained and administrative preparations from previous semesters can be used. This is followed by the VCL, where there are only marginal differences between established and new collaborations, as each module is unique in its challenges concerning student supervision, conflicts that arise, and coordination tasks. Finally, the post-doing phase can be shortened in existing partnerships through established assessment standards and sustainability already created, but here, too, student reflections should

also be collected, analysed, and considered for improvement in every new course. Table 3.1 shows a recommendation for new and established VCL collaborations.

Finally, it should be noted that this schedule is based on the experience gained from the COWEB and VALEU-X projects and represents a recommendation for future collaborations. In particular, the time needed to prepare and create the prerequisites can vary considerably depending on the partner country.

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