T.I.M.E. Projects/ Final Report

IMPROVE

Interculturality in Mobility PROgrams through Virtual Environments (COIL and BIP)

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Summary of the Project

Online and blended environments connect engineering classes in different countries. Both Collaborative Online International Learning (COIL) and Blended Intensive Programs (Erasmus+ BIP) provide instructors with venues to promote students' international, interdisciplinary collaboration. As virtual exchanges, COIL and BIP courses are therefore key elements in the internationalisation of higher education, allowing engineering students to connect across cultures and become sensitive to societal needs. A key notion in this process is Intercultural Communicative Competence (ICC), which is rarely addressed systematically in these programs; instead, it is expected to develop incidentally through students' experience. Given this challenge, attention needs to be paid to its implementation, particularly regarding learning outcomes that can emerge through teamwork between instructors and students from diverse cultural, linguistic and disciplinary backgrounds.

IMPROVE fills a gap by investigating whether and how ICC is addressed in engineering COILs and BIPs within the T.I.M.E. network. The project investigated whether and how ICC contents were tackled in BIP/COIL syllabi and what were engineering lecturers' views of ICC. Data were gathered from public documents and through a survey administered to lecturers.

We carried out a mapping of BIP and COIL courses offered by T.I.M.E. partner universities by examining public documentation (lists of courses offered on institutional websites). COIL courses were more difficult to identify and locate, as they are grassroots initiatives taken by lecturers within individual courses and they are not always public.

Mapping: an intensive search through T.I.M.E. university websites helped identify the following courses for T.I.M.E. partner universities:

64 BIP courses from 23 universities/ 13 countries

27 COIL courses from 22 universities/11 countries

Course descriptions were categorised (discipline, credits, cycle, etc.) and they were analysed in terms of the presence of ICC, whether in the syllabus as part of contents/intended learning outcomes or indirectly (e.g. in the general website description).

Survey: An extensive survey was sent out to T.I.M.E. representatives so that they could distribute it within their institutions, among engineering educators involved in COIL and BIP courses. We received the following responses:

134 respondents from 24 universities/14 countries

The survey aimed to gather information about participants' experience (in online and hybrid learning as well as in university teaching), their understanding of ICC, and whether and how they integrated ICC in their online/blended courses. In order to obtain a more thorough view of lecturers' understanding of ICC, the survey delved into the different components that make up ICC: attitudes, skills, awareness. Finally, it explored participants' perceived needs, constraints and available resources for the integration of ICC in online and blended courses.

General findings show that most online and blended courses are quite flexible: transdisciplinary and transcycle (i.e. open to bachelor's and master's students alike). This implies that such courses are addressed to experienced students with a certain level of maturity and with already acquired skillsets and expertise, which lays the ground for approaching ICC from a reflective, hands-on perspective. In terms of implementation, ICC is not systematically addressed, but expected to emerge as a result of international group work. Most online and blended courses are organised and/or taught by experienced lecturers. While ICC is considered to be important in engineering education, there is a lack of shared understanding and little consistency in its implementation. A reflective approach needs to be adopted so that contact and conflict emerging in transnational teamwork can be leveraged to promote reflection on ICC. Finally, it should be noted that a large number of BIP/COIL courses are organised by networks and alliances, which points to the role of such consortia as catalysts for increasing collaborative international educational initiatives.

Based on these findings, IMPROVE has proposed a research-informed framework of ICC that can be adapted to virtual environments in engineering education. Guidelines have been provided for T.I.M.E. partners to design COILs and BIPs that can successfully develop engineering students' ICC.

Results of the Project

Throughout the development of the project, and as a result of the contact with educators from different countries, it was noted that COIL and BIP are less known than one would expect and that, in addition to the study of ICC in such courses, it would be necessary to design a resource kit to help educators to set up BIP and COIL. Therefore, in addition to the expected practical output of the project (a toolkit for integrating ICC in BIP and COIL), an additional interactive resource kit was included, to add value to the IMPROVE project.

Both the interactive toolkit for integrating ICC and the set of resources for setting up BIP and COIL have been developed using Genially, so as to offer participants an easy-to-use tutorial, with specific guidance. The resources are available at the links below, and will shortly be added to the IMPROVE website.

INTERACTIVE TOOLKIT FOR INTEGRATING ICC INTO BIP AND COIL
https://view.genially.com/69623f9daef68b4aa4fc9c40

INTERACTIVE RESOURCE KIT FOR THE SET-UP OF BIP AND COIL
https://view.genially.com/69a9b3dac14bf7dea2da4313

To gain further visibility for the IMPROVE project, and especially to make results available to T.I.M.E. partners and beyond, a website has been created, which is being updated with the latest results. This website is available here:

https://sites.google.com/upc.edu/improve-timeproject/

Because this project approached research from an applied perspective, with the aim of providing results that are useful for T.I.M.E. partner universities, the entire research process was carried out in a dialogic way, in contact with T.I.M.E. audiences through regular webinars/seminars, in which we could discuss shared understandings of ICC. .

These presentations, which combined research-informed resources and dissemination of interim results, are listed on the IMPROVE website, and the slides used for each are freely made available as resources for T.I.M.E. partners:

https://sites.google.com/upc.edu/improve-timeproject/outputs
(under “Workshop and seminars given for T.I.M.E. Association/partners”)

A total of three presentations were given to T.I.M.E. partner audiences:
1-A workshop given during the T.I.M.E. General Assembly in October 2025 (Laperaanta, Finland), on ICC in online and blended environments.
2-A workshop given at the Ecole Centrale de Lyon (France) in January 2026, on online teaching and assessment.
3-An online presentation in February 2026 to T.I.M.E. institutional representatives, with initial project results from the mapping and survey.

In addition to presentations given to T.I.M.E. partners, we have also given two presentations addressed to scientific experts in ICC, the first one (May 2025) at the start of the project, to share our literature review on ICC and the research design with members of our broader research group (*Cercle de Lingüística Aplicada*, University of Lleida, Spain), and another one to share the research design and initial mapping results to a broader audience, as part of a keynote address given at the 10th LSPHE (Languages for Specific Purposes in Higher Education) Conference (University of Belgrade, Serbia).

To increase the visibility of the project results, several presentations are planned to be given at international scientific conferences. The following papers have been accepted for conferences to be held during the months of May and June 2026 (and are expected to be published in international peer-reviewed academic journals):

Paper 1 – Towards the integration of intercultural communicative competence in online and blended learning: Insights from current COIL and BIP course design and instructor perspectives

(Abstract accepted for the joint AELFE-SDUTSJ Conference. May 2026). This presentation reports on a research project examining how intercultural communicative competence (ICC) is currently conceptualised and addressed in collaborative online and blended learning such as COIL (Collaborative Online International Learning) and BIP programmes (Erasmus+ Blended Intensive Programmes). Although these formats appear like ideal venues for the development of intercultural and multilingual competences, it is often expected that such competences are developed spontaneously, by merely bringing together teachers and students from different backgrounds. Hybrid and online international teaching calls for the collaboration of course designers and LSP specialists to address the systematic and explicit integration of ICC in such courses, which may be challenging for subject-specific lecturers. Against this background,this paper provides an overview of the extent to which ICC is present in the course descriptions for COIL and BIPs in engineering based on an extensive mapping of courses from universities worldwide. Through quantitative and qualitative methods, the course mapping will be combined with survey data from engineering instructors' perspectives on ICC and their approach to ICC in their COIL/BIP courses. Project results will be useful for LSP instructors to develop research-informed ICC activities that can be integrated into COIL and BIP courses, so as to make the most of such international environments to improve students' ICC.

Paper 2 – Mapping Intercultural Communicative Competence in Engineering Virtual Exchange: A Systematic Analysis of BIP and COIL

(Abstract accepted for the Unicollaboration 2026 conference.) This empirical study examines the extent to which ICC is addressed in engineering virtual exchange programs within the network of T.I.M.E. (Top International Managers in Engineering) universities–over 50 universities in about 40 countries from all over the world.

Using mixed-methods analyses, we mapped the public websites of all T.I.M.E. partner universities and identified those universities with BIPs and COILs. This first analysis revealed that BIPs have much greater visibility than COIL. Syllabi were coded for explicit ICC contents and learning outcomes as well as for the mention of (inter)culturality in the promotional course materials. Preliminary findings point to a fuzzy view of ICC mainly based on students' experience, cultural exchange and bonding. BIPs are often presented as a taster for other international experiences, while very few courses feature explicit ICC contents in their syllabi. Course documents and websites also mention the benefit of collaborating with culturally diverse students and practising English as a lingua franca. In addition to the mapping and survey analysis, survey data were collected from engineering instructors involved in BIP/COIL to explore their awareness of and approach to ICC. Initial findings aim to inform the development of a research-based ICC framework specifically adapted for engineering virtual environments, addressing the critical need for systematic ICC development in STEM internationalization efforts.

In addition to these two forthcoming conferences (with papers accepted), further dissemination is planned through conferences related to ICC and online/blended education. Some possible venues include LSPHE 2026 (to be held at Lancaster University in September 2026). Another appropriate venue for the dissemination of final IMPROVE results is the 44th AESLA Conference (International Conference of the Spanish Association for Applied Linguistics, to be held in Madrid in early 2027). In connection with the IMPROVE project, contact has been made with the IAIR (International Academy for Intercultural Research), for further dissemination and exchange (especially through its conference and highly ranked journal).

Target group/s and impact

COIL and BIP teachers:

- Having access to the Resources and the Toolkit can help COIL and BIP teachers to readily understand and grasp the relevance of ICC and encourage them to make some interventions to incorporate ICC. By systematically addressing ICC in their courses, with meaningful activities, students will not only develop content knowledge but also their ICC thanks to their COIL and BIP courses.
-Being more knowledgeable about the components of ICC and when and how to better integrate ICC in COIL/ BIP can result in increased teachers' willingness to engage in ICC, for students' benefit.
- The Resources and Toolkit produced as a result of the IMPROVE project also contribute to enhancing teachers' ICC so they apply it in their careers (as teachers and as researchers).
-They will also become more aware that ICC in COIl and BIP are important actions toward the internationalization of their institution.

Institutional coordinators:

- Using insights from this study can raise awareness about the still little presence of BIP and COIL courses in their institutions, acknowledging their potential.
- Drawing on the results from the mapping, institutional coordinators can identify those lecturer profiles, types of courses and conditions of implementation that can lead to the successful design of BIP and COIL. This information can be used for the design of appropriate institutional policies, training and resources for the development of such programmes.
-From the survey in the study and the Resource Kit available, coordinators can appreciate that their university can be internationalised by means of increasing/creating new COIL and BIP courses.
- From the insights gained, coordinators can include ICC as another important benefit for students on their institutional international webpage.

Students:

- If teachers integrate ICC in a systematic and planned way, COIL and BIP students will be able to make the most of their international online experience, acquiring more resources to navigate uncertainty when working and studying with international partners.
- Students will become more reflective and aware of the importance of ICC and of the impact on their employability–becoming more prepared for a global labour market.

T.I.M.E. network:

- Our mapping provides a visual picture of the state of the art in all T.I.M.E. partners, identifying weaknesses or, in many cases, digital teaching modalities (like COIL and BIP) that are not catered for so far. Our results point to the benefit of incorporating ICC into all these courses so that these courses' internationalising potential is appreciated and fully realised.
-Out Toolkit and Resource kit can be made accessible to all partners, increasing the visibility of COIL and BIP courses. They act as a seed that is now planted and which will hopefully become more important.
-The IMPROVE project has been featured on the website of Unicollaboration, the largest world organisation in virtual and blended educational programmes:
https://unicollaboration.org/index.php/member-projects/

Sustainability of the programme

- COIL and BIP are sustainable ways of internationalising universities' internationalisation actions, complementing the traditional and well-known physical mobility exchanges.
- The IMPROVE project can be scaled up by expanding research into engineering lecturers' views of ICC in COIL and BIP and, especially, by setting up a COIL/BIP hub that can be useful for T.I.M.E. partners to increase the effectiveness of such collaborative international courses as a sustainable internationalisation strategy.

Project expenses

The major expense for the project was research time, paid for in-kind by the researchers of the consortium, as per the project application budget. Looking only at the expenses supported by the € 10.000 T.I.M.E. grant, the costs were allocated to research management and research assistant (€ 4000), and support towards conference fees and participation (€ 6000, split between the staff of the consortium).

Members of the consortium

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