*77Erasmus+ KA220, Fostering Students' Interdisciplinary Competence through the Action-Oriented Approach and Collaborative Online International Learning*

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# COIL SPECIAL REPORT

*Date of report:* February 28, 2025
*Coil period:* autumn 2024 (October-November)
*No. of cohorts:* 2

## I. Introduction

- Leading institutions: University of Constantine the Philosopher, Nitra, Slovakia, Eszterházy Károly Catholic University, Eger, Hungary
- Monitoring institutions: Partium Christian University, Oradea, Romania, Badji Mokhar University, Annaba, Algeria
- Participating institutions: Gymnázium Nitra, Slovakia; Gymnázium Myjava, Slovakia; Gymnázium Liptovský Mikuláš, Slovakia; Gymnázium Banská Štiavnica, Slovakia; Partium Christian University, Oradea, Romania; Eszterházy Károly Catholic University, Eger, Hungary; Badji Mokhar University, Annaba, Algeria

In accordance with the project proposal, this special report has been prepared by the partner institution of the Secondary Grammar School in Banská Štiavnica, Slovakia, following the final sets of COIL cohorts. These project special reports summarize the outcomes and results of the COIL cohorts, contributing to the overall objectives of the project.

The main objectives of the Workpackage n. 3 are as follows:

1. to validate newly designed learning materials in a highly interactive and international educational virtual setting;

2. to develop interdisciplinary competence of all participants (teachers and students alike);

3. to empower teachers and students who have no or very little previous experience with COIL to get actively involved;

4. to provide teachers experienced in COIL with opportunities to share their expertise and knowledge with others and to improve their own practice in this field;

5. to provide safe space for communication and creativity of all participants;

6. to intensify, strengthen and sustain collaboration and network of partner institutions involved in the project;

7. to get necessary feedback from participants on the quality of learning materials and the effectivity of their use in COIL.

These objectives are appropriately reflected in the methodology outlined below (see Section II), as well as in the assessment of COIL data and the analysis of its results (see Section III).

## II. Methodology

The following qualitative and quantitative indicators were used to measure the level of achievement of the work package objectives and the quality of the results:

- COIL inclusivity for both teachers and students;
- quality of the newly designed digital teaching materials (content, interdisciplinary perspective and adaptability to COIL);
- COIL participation of all partner institutions;
- teacher and student motivation for active involvement in COIL;
- teacher and student motivation for COIL implementation in their respective institutions;
- student activity and interaction with students from other partner institutions.
  - number of COIL cohorts (overall estimate – *n* 8)

- number of teachers involved in COIL (overall estimate - *n* 25)
- number of students involved in the activities of the resource centre (overall estimate – *n* 130)
- number of feedback questionnaires collected (overall estimate - *n* 155).

*2.1 Data Collection*

To evaluate the project's success, we employed both quantitative and qualitative methods. Data were gathered through pre- and post-COIL questionnaires for students, a post-COIL questionnaire for teachers, and observation sheets for monitoring institution teachers.

In particular, the online questionnaire for participating students (pre-COIL cohort) had 7 items (one open-ended and one closed-ended item covering factual information, one closed-ended item and four rating scales relating to the Work package n. 3 assessment). The online questionnaire for participating students (post-COIL cohort) had 8 items (again, consisting of one open-ended and one closed-ended item to cover factual information and to pair up the questionnaire, two closed-needed items, and four rating scales to assess the Workpackage n.3). The online questionnaire for participating teachers (post-COIL cohort) had 18 items (one open-ended item for factual information, two closed-ended and three open-ended items and 12 rating scales to assess and comment on the Workpackage n.3). The observation sheet for monitoring teachers had the format of a structured observation including 12 items (two factual open-ended items, one open-ended item and 9 rating scales for Workpackage n.3 assessment).

*2.2 Sample Description*

The research included a cohort of 37 students in the pre-questionnaire phase and 28 students in the post-questionnaire phase. The different number of students attending the COIL sessions at the beginning and at the end of the sessions resulted partly from the technical issues – relating to the online format and the administration process of the research tools (for more, see below). Following the project specifications, the students were from 4 countries (Slovakia, Algeria, Romania and Hungary) and 8 institutions (four universities and four grammar schools). We also gathered feedback from teachers who facilitated COIL in person (1 from Hungary and one from Romania). Observation

feedback was obtained from 11 respondents monitoring the COIL sessions (6 from Slovakia, 4 from Romania, 1 from Algeria).

## III. Results

The assessment below is based on pre-and post-COIL questionnaires, teachers' post-COIL questionnaires and COIL observation sheets and follows the project Workpackage no. 3 objectives.

*3.1 Student Evaluation*

**Pre-COIL Questionnaire**

Regarding students' understanding of the concept of interdisciplinarity, 75,7% of respondents were able to select the most appropriate definition, suggesting that *interdisciplinarity is when different subjects or fields of study are combined and work together*. Although 51,4% of the respondents replied that they were only *somewhat familiar* with the concept and 46% replied that they were *not familiar* with it. Most of the respondents believed that attending the COIL sessions would enhance their knowledge of the topics discussed (57% *agree*, 41% *strongly agree*). Vast majority of respondents agreed with the statement regarding their *active participation in discussions and other activities during the COIL sessions* (16% *strongly agree*, 76% *agree*). Similarly, respondents mostly believed that they would have enough opportunities to participate and speak freely during COIL sessions (22% *strongly agree*, 65% *agree*).

**Post-COIL Questionnaire**

After attending the COIL sessions, more than half of the respondents replied that their understanding of interdisciplinarity changed over the course of the COIL sessions (68% of respondents). Even though, the data suggest that the number of respondents who were able to select the most appropriate definition of the concept of interdisciplinarity are about the same (75%). Moreover, the least appropriate definition was selected by 4% of respondents after the COIL sessions – compared to 5% in the pre-COIL questionnaire.

On the other hand, respondents praised the format of the COIL sessions: 89% of the respondents *strongly agreed*, and 19% *agreed* that teachers'

instructions were clear. 60% of the respondents *strongly agreed*, and 36% *agreed* that attending the COIL sessions enhanced their knowledge of the topics discussed. The respondents also mostly believed that they were active in discussions and other activities during the COIL sessions (21% *strongly agree*, 57% *agree*). They also mostly agreed with the statement that they were given enough opportunities to participate and speak freely during COIL sessions (46% *strongly agree*, 43% *agree*).

*3.2 Teacher Evaluation*

**Post-COIL questionnaire for teachers**

As regards the usefulness of the lesson plan in executing the COIL session, teachers were assessing the lesson plans as *very useful* (75%) and only marginally as *somewhat useful* (25%). Nevertheless, 25% of the respondents replied that there were also some unexpected events during the COIL sessions. These included general technical issues e.g. problems with the Internet connection.

The effectiveness of interaction with the students in the online sphere, compared to a traditional in-person lesson, showed considerable differences (75% of the respondents believed it was *more effective*). At the same time, all the respondents believed that they made effective use of the tools of the digital medium/platform (100%). Teachers used the following tools and formats in the online COIL sessions: Google Classroom, shared Google documents, PPT presentations, jam boards, breakout rooms and YouTube videos via Zoom link. All the respondents agreed that using digital tools enhanced the teaching experience and improved the lesson (100% *agree*).

As for interdisciplinary competence, all the teachers agreed that the COIL session helped develop their interdisciplinary competence (75% *strongly agree*, 25% *agree*). They also replied that their students had enough opportunities to participate in discussions and other activities (75% *strongly agree*, 25% *agree*), confirming that their students could speak freely and that their ideas and contributions were accepted (100% *strongly agree*). Also, all the teachers agreed (100% *strongly agree*) that their instructions were clear and that the aims and objectives of the lesson were clearly communicated to students (25% *agree, 75% strongly agree*). As for the lesson aims and objectives, respondents believed that these were achieved (100% *strongly agree*). Teachers were thus satisfied with the session results (50% *very satisfied*, 50% *satisfied*) and felt that

the material was appropriate for the students' age group and proficiency level (100% *strongly agree*). On the other hand, although 75% of the respondents believed that all students were equally engaged with the topic, 25% of the respondents disagreed with the statement. In the final comments, respondents' replies reflected great satisfaction with the work of students: they were pleasantly surprised by the number and activity of the participants and observers, students were actively involved and provided insightful and creative ideas, offered mature and elaborate views on the topics, demonstrated leadership skills, even more, technical issues did not prevent them from being active participants.

*3.3 Observer Evaluation*

**Observation Sheet**

Most of the monitoring teachers agreed with the statement that the objectives of the session were clearly communicated to students (68% *strongly agree*, 28% *agree*). The results imply that the teacher`s approach and lesson plan were appropriate for meeting the session`s aims and objectives (65% *strongly agree*, 35% *agree*). The respondents also believed that the teacher`s instructions to students were communicated clearly (80% *strongly agree*, 20% *agree*). Regarding collaboration between students, teachers seemed successful in encouraging students to collaborate (68% *strongly agree*, 24% *agree*). This was also reflected by the data showing that students had enough opportunities to participate in discussions and other activities (88% *strongly agree*, 12% *agree*). Monitoring teachers confirmed that students could speak freely, and their contributions and ideas were accepted by the teacher and other students (96% *strongly agree*, 4% *agree*). Accordingly, the overall atmosphere of the session was friendly and supportive (92% *strongly agree*, 8% *agree*). The material provided was appropriate for the students' age group and language proficiency (88% *strongly agree*, 8% *agree*). The respondents mostly consider the session as truly interdisciplinary (as opposed to focusing too much on only one discipline, 72% strongly agree, 28% agree). In the additional comments section, the respondents commented mainly on positive aspects such as interesting, lively and exciting activities, well-prepared topics, constant activity of students and their motivation, encouraging atmosphere emphasizing strong interdisciplinary links. On the other hand, few drawbacks were mentioned: a technical problem while working in groups, which was sorted out after the first activity and one session going overtime without any group work.

## IV. Conclusions

The autumn period of 2024 of COIL can be assessed as successful in achieving its objectives. Although some issues still need to be addressed as well, according to collected data the environment of COIL sessions provide both teachers and students with possibilities to extend their teaching/learning experience beyond traditional classrooms. In other words, COIL seems inclusive for both teachers and students as most of the technical issues from the first period sessions have been successfully addressed and delt with. Students were able to tackle technical problems more efficiently and to enjoy the online format without significant obstacles and with the need of only little special assistance. Even though special instructions are needed while attending online teaching environments, as well as extra time to explain and to practice working with some of the tools, including the administration, the data clearly show the asset of COIL sessions.

The newly designed digital teaching materials (content, interdisciplinary perspective, and adaptability to COIL) have proven to reach the assumed quality – though there are still several recommendations for its improvement (i.e. regarding the technical issues during COIL sessions). The data imply that the previous recommendations for improvement of interdisciplinary competence have been reached fully (100% of respondents agree). However, not all students were able to define the term interdisciplinary correctly, they agreed that attending the COIL sessions enhanced their knowledge and all the teachers agreed that the COIL session helped develop their interdisciplinary competence

The individual partner institutions were participating in compliance with the project plan. Therefore during this last period of COIL, the administration of questionnaires was handled well, and even though the number of students during the COIL sessions was still not consistent, the lesson plans created by the leading institutions were fully taking this issue into consideration, they were prepared to work with varied groups of students and thus all the aspects which were planned to be reflected in the last COIL sessions have been reflected accordingly. The individual research tools, however, proved effective in eliciting relevant feedback from the participants on the quality of learning materials and the effectiveness of their use in COIL. Moreover, both teachers and students were motivated and actively involved in the COIL sessions; they collaborated with students from other partner institutions and expressed strong approval of the format of the COIL sessions.

While working on the newly designed lesson plans and learning materials, both students and teachers have, in many respects, developed their interdisciplinary competence – although there is always some space for improvement in this respect. The materials have been validated and tested in a highly interactive and international educational virtual environment. Teachers and students, regardless of their previous experience with COIL, have been actively engaged in the process, whereas those more experienced had a chance to share their expertise, enhance their own skills, and contribute to a collaborative environment that has fostered open communication and creativity for all involved.

All partner institutions can thus consider the Autumn 2024 COIL cohorts a positive experience that helped them intensify, strengthen, and sustain collaboration and network.

*This special report is derived from the autumn 2023 report and serves as a comprehensive overview of the progress and outcomes of the last period of COIL. We would like to extend our gratitude to all involved for their efforts and participation.*

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