

**Publisher**<http://jssidoi.org/esc/home>

RESEARCH ON OUTCOMES OF COLLABORATIVE ONLINE INTERNATIONAL LEARNING PROJECT AT VILNIUS KOLEGIJA/HIGHER EDUCATION INSTITUTION

Nikolaj Ambrusevič¹, Margarita Išoraitė²

^{1,2} *Vilniaus kolegija/Higher Education Institution, Saltoniškių Str. 58, Vilnius, Lithuania*

E-mails:¹ n.ambrusevic@vfv.viko.lt; ² m.isoraitė@vfv.viko.lt

Received 20 December 2024; accepted 6 April 2025; published 30 June 2025

Abstract. Large-group collaborative learning approaches are rapidly gaining popularity in undergraduate education, particularly in globalized economies and diverse work environments. This study examines the impact of the Collaborative Online International Learning (COIL) project on developing intercultural competencies and acquiring knowledge about foreign markets. The research focuses on an online collaboration between Vilniaus kolegija/Higher Education Institution and Opole University of Technology, where students engaged in cross-cultural teamwork, discussions, and joint assignments. Qualitative data were collected through student interviews to gain deeper insights into their experiences and perceptions. The analysis revealed that participants significantly improved their intercultural communication skills, developed a deeper understanding of cultural diversity, and enhanced their ability to work in international business settings. Additionally, students expanded their knowledge of foreign markets, trade practices, and business strategies through interaction with peers from different cultural and educational backgrounds. The findings indicate that COIL effectively fosters intercultural competence, promotes collaborative problem-solving, and prepares students for future careers in a globally connected world. By integrating virtual exchanges into higher education curricula, institutions can enhance students' employability, cultural awareness, and adaptability to diverse professional environments. This study highlights the potential of COIL as a valuable pedagogical tool in international business education and beyond.

Keywords: collaborative online international learning; intercultural competence; global business

Reference to this paper should be made as follows: Ambrusevič, N., Išoraitė, M. 2025. Research on Outcomes of Collaborative Online International Learning Project at Vilniaus Kolegija/Higher Education Institution. *Entrepreneurship and Sustainability Issues*, 12(4), 143-157. <http://doi.org/10.9770/w9993947955>

JEL Classifications: I21, I23, I25

1. Introduction

The case-based collaborative learning (CBCL) pedagogy was introduced for pre-clerkship teaching at Harvard Medical School in 2015, with subsequent adoption by other medical schools (Besche et al., 2025). This approach highlights the significance of collaborative learning (CL) in modern education. Collaborations between universities and organizations are increasingly essential for societal progress (Inada, 2024). According to Inada (2024), the institutional philosophy of voluntarism, combined with a human-centered approach, servant leadership, and engagement with the younger generation, is pivotal in fostering value creation within community and social entrepreneurship education.

Zhao (2024) emphasizes that collaborative learning traditionally occurs during in-person meetings. However, technological advancements have facilitated Collaborative Online International Learning (COIL), a pedagogy that connects students and lecturers from different countries for joint projects and discussions as part of

coursework. This concept has gained significant attention among scholars, including Appiah-Kubi and Annan (2020), Aškerc Zadavec (2023), Bienvenido-Huertas and Rubio-Bellido (2022), Borger (2022), Botero-Gómez et al. (2023), Chernova et al. (2024), Dyshko et al. (2021), Esche (2018), and Falkenberg et al. (2023), Zamiri and Esmaeili (2024). These authors underscore that COIL facilitates meaningful global learning experiences by integrating cross-cultural, student-centred collaboration into academic programs. Furthermore, COIL serves as a cost-effective solution for universities to promote international engagement among students.

Despite its growing popularity worldwide, the COIL approach remains relatively novel within the Lithuanian education system. One of the first practical implementations of a COIL project took place at the Faculty of Business Management at Vilnius kolegija/Higher Education Institution. In this initiative, third-year students enrolled in the International Business study program participated in a COIL project during the Marketing module. Collaborating with peers from Opole University of Technology in Poland, students were tasked with investigating the specificities and unique characteristics of Lithuanian and Polish markets. They aimed to propose practical solutions for introducing new products to these markets.

Although the project was largely successful, several challenges and problematic aspects emerged, particularly regarding the scientific foundation and pedagogical framework of COIL implementation. These challenges underscored the need for a deeper investigation into the integration of COIL within Lithuanian higher education institutions.

The primary **scientific issue** addressed in this study is formulated through the following research question: *What are the challenges associated with Collaborative Online International Learning (COIL) at Vilnius kolegija/Higher Education Institution?*

The **research aims** to investigate the implementation, challenges, and outcomes of COIL at Vilnius kolegija/Higher Education Institution, focusing on understanding its impact on student learning and internationalization.

To achieve the research aim, the following **objectives** were established:

- To analyze the concept of Collaborative Online International Learning (COIL).
- To examine the application of collaborative online international learning tools, including guerrilla marketing strategies.
- To evaluate the impact of COIL on learning internationalization.
- To investigate the challenges and outcomes of COIL implementation at Vilnius kolegija/Higher Education Institution.

This research seeks to contribute to the existing body of knowledge regarding COIL by examining its practical application in Lithuanian higher education. By identifying the benefits and challenges of COIL implementation, the study aims to provide insights for educators and institutions seeking to enhance international collaboration and cross-cultural learning opportunities for students.

2. Collaborative online international learning: theoretical aspects

2.1. Collaborative online international learning concept

Collaborative online international learning (COIL) is an innovative pedagogy that allows faculty and students to use technology to collaborate with peers at universities worldwide. COIL takes place over two or more courses taught by professors from different countries and can last from a few weeks to an entire semester. Using a computer or phone with internet access, students meet and communicate in synchronous and asynchronous meetings where they exchange experiences and ideas and work together in teams to complete projects that their respective professors evaluate.

First, collaborative online international learning (COIL) is an educational approach that integrates online technologies to connect students and educators from different countries for joint projects and coursework. Appiah-Kubi and Annan (2020) highlighted that COIL facilitates curriculum internationalization while

developing students' intercultural competencies, ensuring that all students, not just those participating in study abroad programs, gain international experience. This approach fosters inclusivity and allows students to engage with peers from diverse cultural backgrounds.

Hackett et al. (2023) emphasized that COIL courses typically span from four weeks to an entire semester, involving multicultural student teams engaged in collaborative assignments, where educators play a pivotal role in designing these assignments to promote intercultural learning. Hackett et al. (2023) state that this collaboration aims to expand the student's understanding of the course content and help develop intercultural competencies. Similarly, regarding Gow (2023), COIL encourages students and teaching staff from different cultures to collaborate in class, enhancing their understanding of the subject matter while developing intercultural competencies.

The implementation of COIL offers numerous *benefits* for both students and educators. Dyshko et al. (2021) noted that COIL projects integrate distance learning while providing multilingual students real-time practice opportunities in their native language. This inclusive approach also benefits disadvantaged students who may face technological challenges.

Naicker et al. (2022) further emphasized that COIL enhances students' learning experiences by promoting collaboration, self-directed learning, and intercultural awareness. Romero-Rodríguez et al. (2023) highlighted that COIL fosters internationalization, innovation, and interdisciplinary learning, making it a valuable pedagogical tool for modern education.

Borger (2022) described COIL as an innovative and effective method that promotes students' global intercultural competence (ICC) while using digital teaching methods to create equal learning environments. Similarly, Esch et al. (2018) stated that COIL allows students to develop intercultural competencies through collaborative online communication with peers from diverse backgrounds.

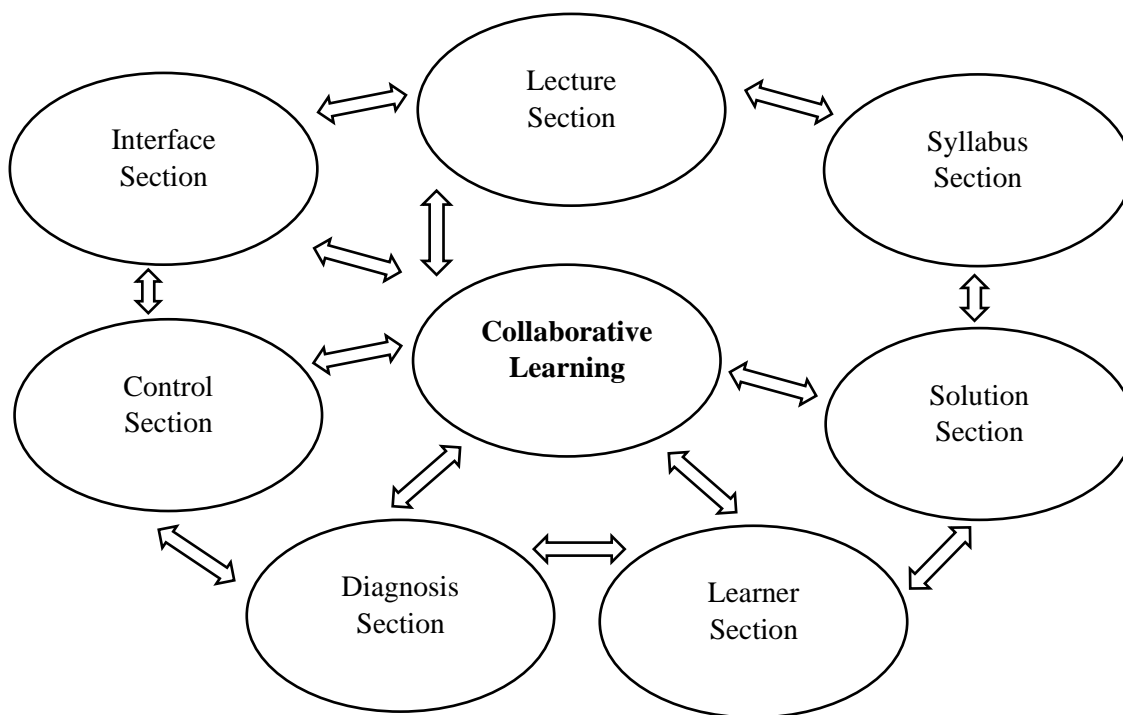


Figure 1. Collaborative learning chart

Source: Barkley et al., 2014

Despite its benefits, COIL presents several *challenges* that must be addressed for successful implementation. Stoten (2024) argued that collaborative learning can pose cognitive and social challenges, as students must

navigate emotional and motivational factors while working together. This aligns with the control-value theory, which recognizes the emotional context of collaborative learning.

Bach and Tiel (2024) noted that digital interaction can be challenging, requiring high-quality communication among group members to ensure the success of the collaborative learning process. Moreover, Nishio et al. (2020) emphasized that COIL projects can vary in scope, ranging from short-term assignments to semester-long programs, with some involving student mobility and others being entirely online.

According to Barkley et al. (2014), collaborative learning groups are formed and developed in many ways to achieve goals where individuals get together within social contexts, cooperate to perform tasks, or join chosen committees with common interests. Ngatmini (2025) emphasizes several key aspects of *implementing* collaboration-based learning:

- educational materials developed in this program, which include the syllabus and learning implementation plan, taking into consideration both educators’ knowledge and experience in related subject;
- learning methods and strategies that must be able to engage students actively, the allocation of available time, and tasks that can improve students' skills, as well as student characteristics;
- lecturers, who are directly involved in the teaching and learning process with real-world experience in good learning relevant to the demands of school-based learning quality.

Moreover, Nishio et al. (2020) emphasized that COIL projects can vary in scope, ranging from short-term assignments to semester-long programs, with some involving student mobility and others being entirely online.

Table 1. COIL definition comparison

Author	Highlight
Roqueta-Vall-Ilosera et al. (2024)	International online activities that allow you to support transversal competencies in diverse and multicultural environments without leaving home.
Suartama et al. (2024)	Implemented through various formal and informal activities.
Pozzi et al. (2023)	Offer collaborative learning activities to some extent in face-to-face and/or blended environments, as well as entirely online, with statistically significant differences and taking into account the methods adopted and the (technological) tools used.
Rodriguez-Salvador and Castillo-Valdez (2023)	It takes a learner-centred approach where participants work together to acquire knowledge, integrates students into an environment where each body grows through learning, and students constantly exchange knowledge to complete a common task.
Wei et al. (2024)	Students generally perceive collaboration as beneficial and prefer individual research, which indicates their beliefs do not match their learning interests.
Tongal et al. (2024)	It can be divided into two main forms: group collaborative learning and partner collaborative learning.
Ramírez-Marín et al. (2020)	Collaborative online international learning (also known as virtual exchanges, virtual mobility, or telecollaboration) varies greatly in design and implementation and research designs.
Wimpenny and Orsini-Jones (2020)	Students can gain hands-on learning through online dynamics and face-to-face interaction. Such interaction includes the development of critical digital literacy skills, acquiring interactive online communication skills, and, most importantly, an openness to the pluralism of knowledge.
Harris et al. (2021)	The essence of COIL is to rely on willing and like-minded faculty colleagues worldwide who are eager to present classes, projects, and performances together using technology.
Zhua et al. (2023)	Program organizers would focus on cultural gaps affecting these programs and provide additional opportunities for intercultural communication to address cultural gaps.

COIL also contributes to achieving sustainable development goals (SDGs), particularly in providing quality education. Quintana-Ordorika et al. (2024) highlighted that COIL not only internationalizes study programs but also trains future educators to adopt pedagogical approaches that promote global collaboration. This aligns with the goal of ensuring inclusive and equitable quality education for all learners.

Furthermore, Sally Strand (2020) examined teachers' experiences in teaching international cooperative learning courses and found that COIL-based training programs can support institutional internationalization strategies. This preparation equips students with the skills required for 21st-century global work and citizenship. Finally, Aškerc et al. (2023) mentioned that online learning positively impacts the social development of study skills, which improves the experience and soft competencies of other students by encouraging them to learn better, as these are essential skills in a digital and intercultural reality.

COIL is an innovative and effective learning method that promotes students' global intercultural communication competence (ICC), provides rich international experiences, and uses new digital teaching methods that promote online collaboration between students and teachers to create equal learning environments that reflect a new approach. COIL definition elements model is presented in Figure 1.

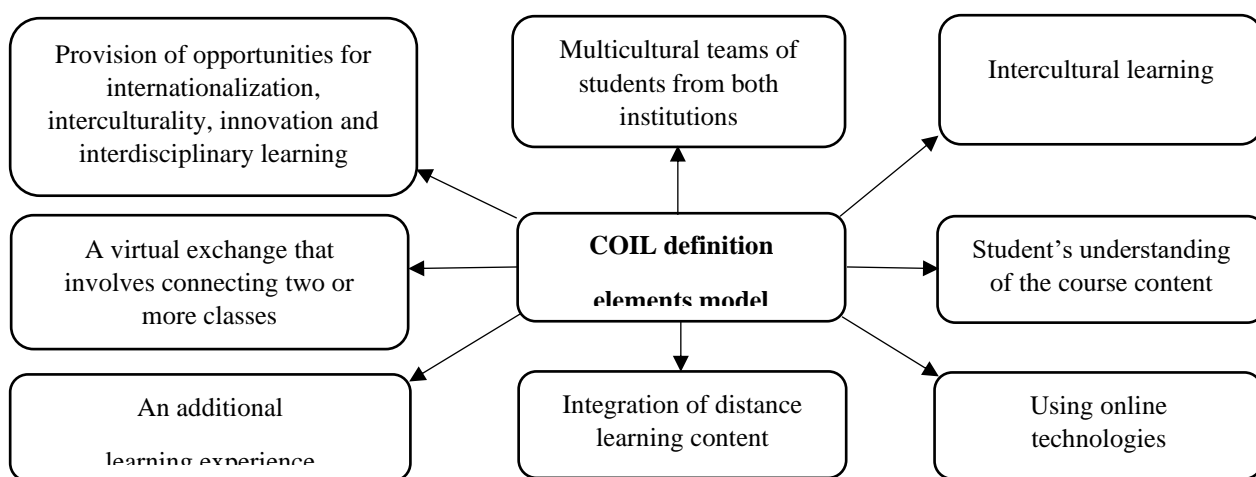


Figure 1. COIL definition elements model

Source: conducted by the authors

In summary, the researchers conclude that a COIL course, which can last from four weeks to an entire semester, typically involves multicultural teams of students from both institutions working on group assignments, with educators consciously designing assignments with intercultural learning in mind and facilitating and promoting this collaborative intercultural learning. This collaboration aims to broaden students' understanding of the course content and help develop intercultural competencies.

Online technologies have become popular in universities worldwide to help internationalize the curriculum. COIL can facilitate students' development of intercultural competencies at home. COIL projects integrate distance learning content and increase opportunities for multilingual students to practice their native language in real time. The project also provides inclusion benefits for disadvantaged students. It offers an additional learning experience where students can interact, collaborate, and take responsibility for their learning, thus expanding intercultural and international learning opportunities.

Collaborative Online International Learning is a method that brings together students and teachers from different cultures to learn, discuss, and collaborate in the classroom. It is a form of virtual exchange that involves connecting two or more classes located in different locations, led by teachers or trained facilitators and has become one of the largest virtual exchange networks in the world.

Collaborative Online International Learning (COIL) is an online technology designed to internationalize study programs and train future educators to apply a pedagogical approach to creators while involving them in international collaborative online learning programs. COIL is an experience developed by academics from various national institutions that aims to provide opportunities for internationalization, interculturality, innovation, and interdisciplinary learning.

2.2. Collaborative online international learning tools

Collaborative Online International Learning (COIL) relies on advanced digital platforms and tools to facilitate cross-cultural collaboration, enabling students and educators to effectively engage in virtual learning environments. These tools, primarily learning management systems (LMS), provide the necessary infrastructure for course content delivery, collaborative tasks, and student progress tracking.

According to Zabukovšek et al. (2022), e-learning platforms are essential for providing digital learning content and managing the learning process. Universities often integrate multiple systems within their e-learning platforms, including world-renowned LMS platforms such as Blackboard, Canvas, Moodle, and Google Classroom. Of these platforms, Moodle and Canvas stand out as free, open-source systems, making them particularly accessible to educational institutions worldwide.

Moodle is one of the most widely adopted LMS platforms globally. Somova and Gachkova (2022) highlight that Moodle operates in more than 200 countries, is installed on over 170,000 devices, and supports more than 30 million courses for approximately 250 million users. Built on pedagogical principles, Moodle is employed for blended learning, distance learning, flipped classrooms, and other e-learning formats in academic and corporate settings (Sternad Zabukovšek et al., 2022).

The effectiveness of COIL initiatives heavily depends on the design and relevance of the platforms used. Botero-Gómez et al. (2023) argue that creating platforms with relevant content ensures accurate information dissemination and enhances student motivation. Moreover, platforms should incorporate systems for institutional tracking to facilitate continuous improvement. Well-designed LMS platforms enable institutions to deliver specialized training to diverse populations and foster collaborative networks, allowing researchers and educators to exchange insights and broaden their understanding of virtual learning applications.

LMS platforms support various pedagogical activities, enabling individual and collaborative learning. Mikroyannidis et al. (2023) emphasize that these systems allow educators to design, deliver, and assess diverse educational activities while tracking learners' progress. In addition, Nguyen et al. (2024) stress the importance of collaborative learning environments within smart educational ecosystems, where LMS platforms play a central role.

Specific tools such as Padlet also enhance collaborative learning experiences. Lee et al. (2024) demonstrate how Padlet's canvas layout can be employed to organize courses, thereby increasing student engagement and interaction with instructors. Similarly, Ota and Murakami-Suzuki (2022) highlight the value of online problem-based learning (PBL) skill sets, particularly for science and engineering students at technical universities in Japan. These skill sets support collaborative problem-solving while promoting the development of critical thinking and technical competencies.

The integration of COIL tools not only facilitates content delivery but also enhances skill development. Simões and Sangiamchit (2023) examined the effectiveness of virtual global learning approaches, finding that students perceived significant improvements in their skill sets through COIL-based activities. Furthermore, Chernova et al. (2024) underscore the importance of pedagogical processes rooted in sociocultural theory, where virtual platforms provide visibility, structure, and logic to learning activities.

In conclusion, COIL tools encompass a range of online platforms designed to deliver digital learning content, manage the learning process, and facilitate collaborative learning. Platforms like Blackboard, Canvas, Moodle, and Google Classroom form the backbone of COIL initiatives, enabling educators to design engaging, student-centered activities. Well-structured platforms ensure appropriate training and inclusivity, empowering institutions to extend educational opportunities globally. COIL tools play a pivotal role in advancing cross-cultural, internationalized learning experiences by fostering collaborative networks and providing pedagogically sound environments.

2.3. Learning internationalization in modern education

Learning internationalization has become an essential aspect of modern education, transforming the way students, educators, and institutions approach knowledge acquisition and dissemination. As globalization shapes societies, internationalization offers pathways for cultural exchange, pedagogical advancement, and institutional growth. This chapter explores the multifaceted nature of learning internationalization, drawing insights from recent studies and highlighting its impact on higher education.

According to Fry et al. (2024), internationalization can be categorized into critical, comparative, and comprehensive genres. Critical internationalization examines power dynamics and inequalities in global education, while comparative internationalization focuses on cross-national analyses of educational practices. Comprehensive internationalization, on the other hand, encompasses all dimensions of global engagement, including curriculum design, faculty development, and student mobility.

Perfözl and López-Varela (2022) emphasize the significance of virtual exchanges, enabling students who cannot participate in physical exchange programs to gain international experience. Through online collaboration with foreign peers and instructors, learners can develop intercultural competencies, broaden their perspectives, and enhance their academic skills without leaving their home countries.

Sá and Serpa (2020) highlight how internationalization operates across three institutional levels:

- Macro level, which includes policy-making and decision-making processes that shape international collaborations and institutional strategies.
- Meso level covers curriculum structures and institutional policies promoting cross-border learning and faculty exchange.
- Micro level, which investigates classroom-level learning processes, including internationalized course content and collaborative projects.

These levels collectively shape the global standing of higher education institutions (HEIs), influencing international rankings and funding opportunities.

Xu and Boudouaia (2023) argue that institutions embracing internationalization are more likely to adopt innovative pedagogical approaches. These changes include updated teaching methodologies, digital learning platforms, and cross-cultural course materials. Such advancements not only support internationalization but also enhance domestic learning environments by integrating global perspectives. While institutional policies often drive internationalization efforts, Bienvenido-Huerta and Rubio-Bellido (2022) note that faculty members play a crucial role in shaping international learning experiences. Educators can design new strategies for internationalization, ensuring their sustainability and continuous improvement. This is particularly relevant in postgraduate programs, where specialized content requires tailored approaches to internationalization.

Li and Xue (2022) highlight the contextual nature of internationalization, which varies based on institutional missions, programmatic frameworks, and target audiences. For example, a research-intensive university may prioritize international collaborations for academic publications, while a teaching-focused institution might emphasize student exchange programs. Zhou et al. (2024) advocate developing competitive international study programs, faculty, and disciplines. This involves designing curricula that reflect global trends, recruiting internationally experienced educators, and fostering interdisciplinary collaborations that transcend national boundaries.

Summing up the analysis of the scientific literature, learning is a never-ending process, requiring openness to new ideas and perspectives. The art of learning extends beyond memorization, involving the integration of new knowledge into existing beliefs and values. This process, known as internalization, plays a crucial role in internationalized learning environments. Internalization requires conscious effort and practice, enabling learners to better retain information, apply knowledge, and develop critical thinking and creativity. It empowers individuals to engage meaningfully with global challenges and contribute to cross-cultural understanding.

In conclusion, learning internationalization is a dynamic and multifaceted process that enriches educational experiences at individual, institutional, and societal levels. Internationalization prepares learners to navigate an increasingly interconnected world through virtual exchanges, pedagogical innovations, faculty initiatives, and contextualized approaches. As higher education evolves, embracing internationalization will remain essential for fostering inclusive, innovative, and globally relevant learning environments.

3. Research methodology and data analysis

3.1. Research methodology

This article presents an analysis of a collaborative cross-cultural project conducted as part of the Marketing curriculum within the International Business bachelor's study program at the Faculty of Business Management of Vilniaus kolegija/Higher Education Institution (ViKo) during the spring semester of the 2023–2024 academic year. The project involved student groups from ViKo and Opole University of Technology, who engaged in a structured, four-week virtual exchange aimed at exploring potential business opportunities between Lithuania and Poland.

The primary objectives of the project were as follows:

- To examine main trends in each other's markets (interests, hobbies, preferred leisure activities, shopping behaviours, favourite types of food, favourite brands of clothes, technology, etc).
- To compare results and determine to what extent trends are similar/different.
- To extend the knowledge of marketing to potential global business opportunities.

Sixteen students from Vilniaus kolegija/Higher Education Institution participated in the project. They formed four groups of 3 to 5 students each and exchanged contact information with representatives from Opole University of Technology to obtain the necessary information for developing their business ideas. All participants were required to formulate specific research questions that would help address the project objectives, with each group's research focus depending on its composition and interests. The conducted research and information exchange aimed to enhance understanding of each other's markets. Based on the research findings, the teams provided suggestions for products and services that could be developed in Lithuania and Poland. As a result, Lithuanian students delivered four presentations introducing new business ideas for the Polish market in the fields of clothing, food, jewellery, and pet products.

At the end of the project, each student was required to submit a 500-word written reflection summarizing their learning experiences and business suggestions by responding to the following questions:

- What did you learn from this project?
- Analyze your interactions with the theories that you have learned.
- How will you be able to use this knowledge in the future?
- What challenges, if any, did you experience?
- Do you have anything else you would like to share?

The provided answers were used for further research when a semi-structured interview was conducted in order to discuss the deeper background of the submitted answers.

3.2. Research data analysis

The analysis of the collected data commenced with its systematic processing into a unified text document, following established qualitative analysis procedures: familiarization with the provided information, data coding, thematic review, and the integration and definition of themes (Tèlešienė, 2005). The qualitative data derived from the iterative search process comprised participants' thoughts and shared insights, supplemented by a semi-structured interview according to established guidelines.

The primary objective of the interviews was to explore key aspects, including the challenges encountered by project participants, the perceived benefits of the COIL project, and experiences related to collaboration with peers. The study sample consisted of 12 students, evenly distributed by gender (6 female and 6 male).

Table 2 presents the main obstacles encountered by participants, categorized into three sub-categories: lack of information, communication difficulties, and role responsibilities.

Table 2. Challenges faced by project participants

Category	Sub-category	Empirical study statements
Challenges faced by project participants	Lack of information	“COIL assignment was a really rewarding experience, but it also brought some challenges. I needed to adapt to a different work style, which was a bit challenging. There was also a lack of information on how exactly we should implement this project” (I1); “The only problem for me was the lack of information from Polish students about the market in their country. To complete the work, our team had to search for information independently. Perhaps this was influenced by the fact that the Polish students did not understand the task correctly at first” (I5).
	Communication	“There were also other small challenging parts like lack of motivation, but clear communication between both teams and thorough planning helped to overcome them” (I3); “I think we should have been more courageous in communicating with Polish students and asking them for help on certain issues about their market. Working on international projects can bring a wide range of benefits that can be used in the future” (I10); “The biggest challenge in the project was communication with students from Poland; it was difficult for us to communicate; we often did not get answers to the questions we asked, and it took a long time until, in the end, we managed to contact them. For these reasons, another significant challenge immediately followed - to find information about the specific shopping habits of that country. Still, everything was done, although it took a lot of time” (I11).
	Responsibilities	“The biggest challenge that we faced as a team was a lack of thorough understanding of what needs to be done and how it should be done. We also encountered a problem of not agreeing on who was responsible for which part of the project, which took us some time to resolve. Since we just met our Polish and Portuguese groupmates, it is natural that some confusion and misunderstandings appear. At last, once we figured out our roles, we started working like a well-oiled machine” (I12).

Despite the challenges, participants reported several benefits, categorized into improved skills, strong international relationships, and increased flexibility. Table 3 outlines these advantages.

Table 3. Benefits of the COIL project for participants

Category	Sub-category	Empirical study statements
Benefits of the COIL project for participants	Improved skills	“This assignment was a beneficial opportunity to learn new or improve existing skills. The most important thing I improved was teamwork skills. My team and I had to interact with the Polish students to find out what work style would work best for both of our teams. We understood the importance of inclusion and effective team dynamics in achieving project goals” (I1); “This assignment was a very useful opportunity to learn new or improve already existing skills. The most important thing I improved was teamwork skills. My team and I had to interact with the Polish students to determine what work style would work best for our teams. We understood the importance of inclusion and effective team dynamics in achieving project goals. So, with good teamwork skills between both teams, the entire project work was not that difficult. This assignment turned out to be a valuable, interesting and extremely rewarding experience that I think both teams enjoyed” (I3).
	Strong international relationships	“This project not only allowed us to expand our business knowledge but also forged strong international relationships. Collaborating with representatives from various cultures enriched our business analysis and opened up possibilities for future careers, studies, and personal development. From this experience, I learned not only how to analyze business opportunities and work on project tasks with international students but also to appreciate the diversity and importance of cultures” (I3); “Participation in this project deepened my understanding of the Polish market and unveiled its various facets, strengths, and weaknesses. Moreover, it provided a great opportunity to comprehend Poland's marketing structures and methodologies. Understanding the peculiarities of the Polish market enables me to

		<p>develop my business more effectively and adapt to the unique market needs. This is a crucial advantage when aiming to succeed in international markets” (I2); These lessons are very valuable for me. They have taught me to be more open to different ideas and careful about talking with people from different parts of the world. This experience has given me confidence and skills that I can use in any job where I have to work with a team, especially in international business. It's clear to me now that understanding different cultures and how businesses work in other countries is very important in today's world” (I6); “The lessons learned will undoubtedly shape future endeavours in understanding consumer dynamics and market trends” (I9); “Another useful thing was an opportunity to find out the new market, to monitor and analyze the online store pages of the Polish animal shop, and to broaden its knowledge. However, cooperation with people from different cultures brings long-term benefits in generating inputs and viewing certain things differently. This knowledge will be useful in the future, as this work has provided general sophistication. I had to take an interest in the Polish animal shop market. I became more aware of the Lithuanian market as part of the information needed to be provided to students from abroad. Participation in international projects brings some experience without any need for physical travel” (I10); “The project was beneficial, and I would like to implement more such projects in other countries. It would be nice not only to get to know different markets but also to get to know and try to work with students from other countries and share experiences and insights” (I11); “This project was a great way for me and my friends to get to know Poland, its culture, and its economic and financial intricacies. I learned a lot about Lithuania's and Poland's food markets and the different factors that affect them. My friends and I did a lot of research on how Lithuania's food market is affected by inflation, import and export price fluctuations, the retail sector, Lithuania's economic growth, unemployment rates and changes in consumer spending power. This allowed us to form an impression of the overall state of the current food market. Also, I learned about Lithuania's food market trends and consumer preferences, which helped me get a general view of what influences have a significant impact on preferences for food products and places to eat or to buy products from” (I12).</p>
	Flexibility	<p>“This collaboration also made it clear how crucial it is to be open-minded and flexible. In business, like in life, things often don't go as planned. We had to adapt quickly when we didn't understand each other or found that our usual ways of doing things didn't work. We learned to find common ground, create new solutions together, and always look for the best outcome for our project. These lessons are very valuable for me. They have taught me to be more open to different ideas and careful about talking with people from around the world. This experience has given me confidence and skills that I can use in any job with a team, especially in international business. It's clear to me now that understanding different cultures and how businesses work in other countries is very important in today's world” (I12).</p>

Collaboration with colleagues was another crucial aspect of the project. Table 4 presents the main themes: skill improvement, understanding cultural interaction, and effective information sharing.

Table 4. Collaborating with colleagues

Category	Sub-category	Empirical study statements
Collaborating with colleagues	Improve skills	<p>“I had never done this type of project before, so I learned a lot from it. I learned what it means to do a project with students from different countries, in my case, with Polish students. This assignment helped me improve some valuable and important skills such as English, communication, time management, adaptability and teamwork” (I1).</p>
	Understanding the importance of interaction between different cultures in companies	<p>“Collaborating with colleagues from Poland and Portugal enriched my business knowledge and helped me understand the importance of interaction between different cultures in companies. It was an exceptional experience that allowed me to broaden my horizons and encouraged exploring various business opportunities. This international team became a learning environment and a circle of friends with whom we could share ideas and experiences even after the project's completion. This experience strengthened my belief that teams with diverse cultures are a powerful engine for business innovation and success” (I2);</p>

		<p>“The COIL task was very interesting, but also a bit challenging. I had never done this project before and learned much from it. I learned what it means to do a project with students from different countries, in my case, with Polish students. This assignment helped me improve some very valuable and important skills such as English, communication, time management, adaptability and teamwork” (I3);</p> <p>“I gained a lot of experience working in a group with students from Poland on a COIL assignment. It was an interesting project; we learned a lot of interesting things about jewellery in our countries and exchanged information on the subject” (I5);</p> <p>“We communicated with the other team through the messenger app, which was the most convenient way for everyone to communicate. We agreed to help each other to find information in our countries first, for example the Lithuanian group searched for the Lithuanian clothing market, the Polish group searched for Poland’s clothing market, we wrote down the most necessary points and sent all the useful information to the other group” (I12);</p> <p>“International business consists of many different things, but one of them is cooperation with various foreign countries, which allows us to expand our horizons and to learn about different business models and cultures. Knowing the foreign market is good for anyone who wants to associate their life with international business and have good overall sophistication. I have been involved in the COIL project with students at the Opole University of Technology in Poland. The theme of my Lithuanian team was animal shops, their goods and services” (I10);</p> <p>“Overall, it was a pleasure to work with international students, as they seemed to be nice, smart and hard-working people. I’d say these international projects are a good way for students to learn to work with people from different cultures. And it helps them build their communication and language skills” (I11).</p>
	Sharing information	<p>“From this experience, I learned how important it is to be flexible and to communicate well when working with people from different cultures. We had to find ways to understand each other despite receiving different instructions. This taught me to be open-minded and adaptable. I learned from our lessons that knowing how to manage a project, communicate effectively, and be gentle with different cultures was important. These ideas helped us figure out how to deal with the challenges and make the project better. They also showed that we need clear ways to talk and agreed-upon steps for our work” (I8).</p>

The project facilitated cross-cultural collaboration, enhancing students’ understanding of international market dynamics and consumer behaviour. It also provided practical experience in applying marketing theories to real-world scenarios. The students’ reflections further contributed to ongoing research on cross-border business development and international marketing education.

Ultimately, this collaborative project demonstrated the value of experiential learning in higher education, equipping students with the skills and insights needed to navigate the complexities of global business environments.

Conclusions

This study contributes to the existing body of knowledge regarding Collaborative Online International Learning (COIL) by examining its practical application within the context of Lithuanian higher education. The findings reveal that COIL is a useful pedagogical approach for enhancing international collaboration and cross-cultural learning opportunities among students. By integrating online technologies, COIL facilitates virtual exchanges between multicultural student teams, typically engaged in group assignments designed with intercultural learning outcomes in mind.

The study highlights several key benefits associated with COIL implementation. Firstly, COIL promotes the development of intercultural competencies without needing physical mobility, allowing students to engage in international learning experiences from their home institutions. This approach enhances students’ understanding of course content while fostering cultural awareness and communication skills. Additionally, COIL projects provide a platform for multilingual students to practice their native languages in real time, further enriching their educational experience. Moreover, COIL offers significant inclusion benefits for

disadvantaged students by providing equitable access to international collaboration opportunities. The virtual nature of COIL projects ensures that students from diverse backgrounds can participate, interact, and take responsibility for their learning. This inclusive approach expands intercultural and international learning opportunities, aligning with the broader goals of curriculum internationalization within higher education.

The findings also underscore the importance of educator involvement in the COIL process. Educators play a crucial role in designing and facilitating assignments that promote collaborative intercultural learning. Their efforts ensure that students not only achieve academic goals but also develop essential global competencies required in an increasingly interconnected world. A notable example of COIL implementation is the collaborative project between Vilniaus kolegija/Higher Education Institution and Opole University of Technology. This project engaged teachers and students from different geographical, linguistic, and cultural backgrounds in collaborative teaching and learning using online communication tools. The study revealed that while students encountered challenges such as language barriers, task formulation, and direct communication between Polish and Lithuanian participants, the project ultimately proved valuable.

The most significant improvement reported by students was the development of teamwork skills. Participants had to collaborate closely with peers from Poland to determine effective work styles that suited both teams. Additionally, the project helped students enhance other essential skills, including English proficiency, communication, time management, adaptability, and collaborative problem-solving. These findings further emphasize the potential of COIL initiatives to equip students with critical skills necessary for success in an increasingly interconnected global environment.

COIL tools encompass a range of online platforms designed to deliver digital learning content, manage the learning process, and facilitate collaborative learning. Platforms like Blackboard, Canvas, Moodle, and Google Classroom form the backbone of COIL initiatives, enabling educators to design engaging, student-centered activities. Well-structured platforms ensure appropriate training and inclusivity, empowering institutions to extend educational opportunities globally. COIL tools play a pivotal role in advancing cross-cultural, internationalized learning experiences by fostering collaborative networks and providing pedagogically sound environments.

In conclusion, learning internationalization is a dynamic and multifaceted process that enriches educational experiences at individual, institutional, and societal levels. Internationalization prepares learners to navigate an increasingly interconnected world through virtual exchanges, pedagogical innovations, faculty initiatives, and contextualized approaches. As higher education evolves, embracing internationalization will remain essential for fostering inclusive, innovative, and globally relevant learning environments.

References

- Appiah-Kubi, P., & Annan, E. (2020). A Review of a Collaborative Online International Learning. *International Journal of Engineering Pedagogy*, 10(1), 109-124. <https://doi.org/10.3991/ijep.v10i1.11678>
- Aškerc Zadavec, K. (2023). Connections between Online International Learning and Inclusion of Intercultural and International Elements in the Curriculum – the Perspective of Slovene Academics. *Education Sciences*, 13(7), 680. <https://doi.org/10.3390/educsci13070680>
- Bach, A. & Thiel, F. (2024). Collaborative Online Learning in Higher Education – Quality of Digital Interactions and Associations with Individuals and Group-related Factors. *Frontiers in Education*, 9, 1356271. <https://doi.org/10.3389/feduc.2024.1356271>
- Barkley, E. F., Major, C. H., & Cross, K. P. (2014). *Collaborative Learning Techniques: a Handbook for College Faculty*. John Wiley & Sons.
- Besche, H. C., King, R. W., Shafer, K. M., Fleet, S. E., Charles, J. F., Kaplan, T. B., Greenzang, K. A., Hoenig, M. P., Schwartzstein, R. M., Cockrill, B. A., & Fischer, K. (2025). Effective and Engaging Active Learning in the Medical School Classroom: Lessons from Case-Based Collaborative Learning. *Journal of Medical Education and Curricular Development*, 12. <https://doi.org/10.1177/23821205251317149>

- Bienvendido-Huertas, D., & Rubio-Bellido, C. (2022). Internationalization Based on Content Modification Combined with Project Management Methodology: an Application in a Spanish Postgraduate Course in Building Engineering. *Education Sciences*, 12, 725. <https://doi.org/10.3390/educsci12100725>
- Borger, J.G. (2022). Getting to the CoRe of Collaborative Online International Learning (COIL). *Frontiers in Education*, 7, 987289. DOI: <https://doi.org/10.3389/educ.2022.987289>
- Botero-Gómez, V., Ruiz-Herrera, L.G., Valencia-Arias, A., Romero Díaz, A., & Vives Garnique, J.C. (2023). Use of Virtual Tools in Teaching-Learning Processes: Advancements and Future Direction. *Social Sciences*, 12 (2), 70. <https://doi.org/10.3390/socsci12020070>
- Chernova, N., Mustafina, J., Jayabalan, M., & Al-Jumeily, D. (2024). Sustainable Learning Process: Assessing the Effectiveness of Teaching Methodology by Analyzing Spatial and Temporal Properties of a Student as a Subject. *Sustainability*, 16(11), 4540. <https://doi.org/10.3390/su16114540>
- Dyshko, D., Minei, E., & Razuvaeva, T. (2021). Applications for Collaborative Online International Learning (COIL) in the Era of COVID. *Thresholds*, 44(2), 206-2023. Retrieved December 9, 2024, from <https://academyforeducationalstudies.org/wp-content/uploads/2022/01/dyshko-et-al-final.pdf>
- Esche, M. (2018). Incorporating Collaborative Online International Learning (COIL) into Study Abroad Courses: A Training Design. *Capstone Collection*, 3096. Retrieved December 9, 2024, from <https://digitalcollections.sit.edu/capstones/3096>
- Fry, G. W. (2024). Transcending Shallow Internationalization: Best Practices for Attaining Excellence in International Higher Education. *Education Sciences*, 14(9), 968. <https://doi.org/10.3390/educsci14090968>
- Gow, A. (2023). Collaborative Online International Learning: a Case Study. *International Conference on Education and New Developments*, 24-26. <https://doi.org/10.36315/2023v2end005>
- Hackett, S., Janssen, J., Beach, J., Perreault, M., Beelen, J., & van Tartwijk, J. (2023). The Effectiveness of Collaborative Online International Learning (COIL) on Intercultural Competence Development in Higher Education. *International Journal of Educational Technology in Higher Education*, 20(5), 1-21. <https://doi.org/10.1186/s41239-022-00373-3>
- Harris, J.M., Seo, M., & McKeown, J., S. (2021). Global Competency Through Collaborative Online International Learning (COIL). *7th International Conference on Higher Education Advances (HEAd'21)*, Universitat Politècnica de Valencia, <http://doi.org/10.4995/HEAd21.2021.13080>
- Inada, Y. (2024). YMCA's Role in Collaborative Learning for Social Entrepreneurship Education. *ISPIM Connects Osaka – Connecting and Empowering Society*, Osaka, Japan on 2-4 December 2024. Event Proceedings: ISBN 978-952-65069-7-5. Retrieved January 21, 2025, from https://conferencesubmissions.com/ispim/osaka2024/documents/1416156555_Paper.pdf
- Lee, H.-J., Lee, E.-H., & Kwon, H.-J. (2024). Online Support for International Students' Engagement in Learning: a Case Study on Padlet Usage at an University in Korea. *Social Sciences*, 13(5), 232. <https://doi.org/10.3390/socsci13050232>
- Li, J., & Xue, E. (2022). Exploring High-Quality Institutional Internationalization for Higher Education Sustainability in China: Evidence from Stakeholders. *Sustainability*, 14(13), 7572. <https://doi.org/10.3390/su14137572>
- Mikroyannidis, A., Perifanou, M., & Economides, A. A. (2023). Developing a Sustainable Online Platform for Language Learning across Europe. *Computers*, 12 (7), 140. <https://doi.org/10.3390/computers12070140>
- Naicker, A., Singha, E., & van Genugten, T. (2022). Collaborative Online International Learning (COIL): Preparedness and Experiences of South African Students. *Innovations in Education and Teaching International*, 59(5), 499-510. <https://doi.org/10.1080/14703297.2021.1895867>
- Ngatmini. (2025). A Review of Collaborative Learning Models Based on Lesson Study. *Canadian Journal of Educational and Social Studies*, 5(1), 100-113. <https://doi.org/10.53103/cjess.v5i1.290>
- Nguyen, L., Tomy, S., & Pardede, E. (2024). Enhancing Collaborative Learning and E-Mentoring in a Smart Education System in Higher Education. *Computers*, 13(1), 28. <https://doi.org/10.3390/computers13010028>
- Nishio, T., Fujikake, C., & Osawa, M. (2020). Language Learning Motivation in Collaborative Online International Learning: an Activity Theory Analysis. *Journal of Virtual Exchange*, 3, Special Issue IVEC 2019, 27-47. <https://doi.org/10.21827/jve.3.35780>
- Ota, E., & Murakami-Suzuki, R. (2022). Effects of Online Problem-Based Learning to Increase Global Competencies for First-Year Undergraduate Students Majoring in Science and Engineering in Japan. *Sustainability*, 14(5), 2988. <https://doi.org/10.3390/su14052988>

- Perfözl, R., & López-Varela, A. (2022). Internationalization of Teaching and Learning through Blended Mobility: Potentials of Joint International Blended Courses and Challenges in Their Implementation. *Education. Science*, 12(11), 810. <https://doi.org/10.3390/educsci12110810>
- Pozzi, F., Manganello, F., & Persico, D. (2023). Collaborative Learning: A Design Challenge for Teachers. *Education Sciences*, 13(4), 331. <https://doi.org/10.3390/educsci13040331>
- Quintana-Ordorika, A., Garay-Ruiz, U., Camino-Esturo, E., & Portillo-Berasaluze, J. (2024). The Impact of Using Collaborative Online International Learning during the Design of Maker Educational Practices by Pre-Service Teachers. *Sustainability*, 16(3), 1222. <https://doi.org/10.3390/su16031222>
- Ramírez-Marín, F., Núñez-Figueroa, L. C., & Blair, N. (2020). Collaborative Online International Learning: Language and Cross-Cultural Experiences of University Students. *Matices en Lenguas Extranjeras*, 14(1), 118-162. <https://doi.org/10.15446/male.v14n1.92144>
- Rodríguez-Salvador, M., & Castillo-Valdez, P. F. (2023). Promoting Collaborative Learning in Students Soon to Graduate through a Teaching-Learning Model. *Education. Sciences*, 13(10), 995. <https://doi.org/10.3390/educsci13100995>
- Roqueta-Vall-Ilosera, M., Malagón-Aguilera, M. d. C., Reig-García, G., Masià-Plana, A., Serrat-Graboleda, E., & Bonmatí-Tomás, A. (2024). Collaborative Online International Learning (COIL): a Teaching and Learning Experience in Nursing. *Nursing Reports*, 14(3), 2355-2369. <https://doi.org/10.3390/nursrep14030175>
- Romero-Rodríguez, J.-M., Ramírez-Montoya, M. S., Glasserman-Morales, L. D., & Ramos Navas-Parejo, M. (2023). Collaborative Online International Learning between Spain and Mexico: a Microlearning Experience to Enhance Creativity in Complexity. *Education + Training*, 65(2), 340-354. <https://doi.org/10.1108/ET-07-2022-0259>
- Sá, M. J., & Serpa, S. (2020). Cultural Dimension in Internationalization of the Curriculum in Higher Education. *Education Sciences*, 10(12), 375. <https://doi.org/10.3390/educsci10120375>
- Sally Strand, M. (2020). Faculty Use of Collaborative Online International Learning (COIL) for Internationalization at Home. *PDXScholar: Dissertations and Theses*, 5470. <https://doi.org/10.15760/etd.7342>
- Simões, A.V., & Sangiamchit, C. (2023). Internationalization at Home: Enhancing Global Competencies in the EFL Classroom through International Online Collaboration. *Education. Sciences*, 13(3), 264. <https://doi.org/10.3390/educsci13030264>
- Somova, E., & Gachkova, M. (2022). Strategy to Implement Gamification in LMS. In F. Portela, R. B. Queirós (Eds.), *Next-Generation Applications and Implementations of Gamification Systems, 2022* (pp. 51-72). Hershey, PA (USA): IGI Global. <https://doi.org/10.4018/978-1-7998-8089-9.ch004>
- Sternad Zabukovšek, S., Deželak, Z., Parusheva, S., & Bobek, S. (2022). Attractiveness of Collaborative Platforms for Sustainable E-Learning in Business Studies. *Sustainability*, 14(14), 8257. <https://doi.org/10.3390/su14148257>
- Stoten, D. W. (2024). Navigating between Anger and Enjoyment: a Control-Value Theory Perspective of Collaborative Learning in a Business School. *Journal of Perspective in Applied Academic Practice*, 12(3), 30-45. <https://doi.org/10.56433/yknsvp85>
- Suartama, I.K., Yasa, I.N., & Triwahyuni, E. (2024). Instructional Design Models for Pervasive Learning Environment: Bridging Formal and Informal Learning in Collaborative Social Learning. *Education Sciences*, 14(12), 1405. <https://doi.org/10.3390/educsci14121405>
- Telešienė, A. (2005). Kritiškosios diskurso analizės metodologinių principų taikymas sociologiniuose tyrimuose. *Filosofija Sociologija*, 5, 1-6. Retrieved December 9, 2024, from https://www.academia.edu/26933731/Tele%C5%A1ien%C4%97_A_2005_Kriti%C5%A1kosios_diskurso_analiz%C4%97s_metodologini%C5%B3_princip%C5%B3_taikymas_sociologiniuose_tyrimuose_Filosofija_Sociologija_5_1_6
- Tongal, A., Yıldırım, F. S., Özkara, Y., Say, S., & Erdoğan, Ş. (2024). Examining Teachers' Computational Thinking Skills, Collaborative Learning, and Creativity Within the Framework of Sustainable Education. *Sustainability*, 16(22), 9839. <https://doi.org/10.3390/su16229839>
- Wei, Y., Soderstrom, N.C., Meade, M. L., & Scott, B.G. (2024). Metacognition about Collaborative Learning: Students' Beliefs are Inconsistent with Their Learning Preferences. *Behavioral Sciences*, 14(11), 1104. <https://doi.org/10.3390/bs14111104>
- Wimpenny, K., & Orsini-Jones, M. (2020). Innovation in Collaborative Online International Learning: a Holistic Blend. In D. Burgos (Ed), *Radical Solutions and eLearning. Lecture Notes in Educational Technology*. Singapore: Springer. https://doi.org/10.1007/978-981-15-4952-6_1

Xu, Q., & Boudouaia, A. (2023). A Study on Technology Use for Sustainable Graduate Education Internationalization at Home: Chinese Teachers' Experiences and Perspectives. *Sustainability*, 15(13), 10621. <https://doi.org/10.3390/su151310621>

Zamiri, M., & Esmaili, A. (2024). Methods and Technologies for Supporting Knowledge Sharing within Learning Communities: a Systematic Literature Review. *Administrative Sciences*, 14(1), 17. <https://doi.org/10.3390/admsci14010017>

Zhao, S. (2024). Collaborative Virtual Learning Environments: A Structure for Designing Digital Educational Materials. *International Journal of Interactive Mobile Technologies*, 18(23), 4-14. <https://doi.org/10.3991/ijim.v18i23.51373>

Zhou, L., Alam, G.M., & Rasdi, R. M. (2024). Marketing Strategies for Internationalization in China's Higher Education: an Ally or Barrier for Sustainable Development? *Sustainability*, 16 (1), 395. <https://doi.org/10.3390/su16010395>

Zhua, Y., Xiab, Y., Yub, Y., & Yufei, H. (2023). Crossing Boundaries through Collaborative Online International Learning (COIL) during Covid-19: A Participatory Case Study in China. *Journal of Comparative & International Higher Education*, 15(3), 98-108. <https://doi.org/10.32674/jcihe.v15i3.4917>

Author Contributions: Conceptualization: *Išoraitė, M.*, methodology: *Išoraitė, M., Ambrusevič, N.* data analysis: *Išoraitė, M.*, writing – original draft preparation: *Išoraitė, M., Ambrusevič, N.*, writing; review and editing: *Išoraitė, M., Ambrusevič, N.*, visualization: *Išoraitė, M., Ambrusevič, N.* All authors have read and agreed to the published version of the manuscript.

Margarita IŠORAITĖ. Doctor of social sciences at Vilnius Gediminas Technical University, title of associated professor was given at Mykolas Romeris University in Lithuania. Associated professor at Vilnius kolegija/ Higher Education Institution. Research interests: human resource management, strategic marketing, marketing management, advertising, entrepreneurship. ORCID ID: <https://orcid.org/0000-0001-9108-0525>

Nikolaj AMBRUSEVIČ. Doctor of social sciences obtained at Vilnius Gediminas Technical University. Associated professor at Vilnius kolegija/ Higher Education Institution. Research interests: brand equity, processes of internationalization, high technology development. ORCID ID: <https://orcid.org/0000-0003-2527-3710>

Copyright © 2025 by author(s). Publishing rights by VSI Entrepreneurship and Sustainability Center
This work is licensed under the Creative Commons Attribution International License (CC BY).
<http://creativecommons.org/licenses/by/4.0/>

