Chapter Four

Overcoming Challenges and Embracing Opportunities: How COIL and VCL Can Boost 21st Century Skills in Western Balkans Higher Education Ecosystem

Esmir Demaj
EPOKA University, Albania
edemaj@epoka.edu.al

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Introduction

The higher education ecosystem is undergoing a rapid transformation, driven by advancements in digital technologies, evolving workforce demands, and the increasing need for international collaboration. The shift toward digital and collaborative learning has become more pronounced in recent years, as traditional teaching methods struggle to keep pace with the expectations of a highly connected, knowledge-driven global economy. The COVID-19 pandemic further accelerated the adoption of online education, highlighting both the challenges and opportunities of virtual learning environments. In this evolving educational paradigm, 21st-century skills have emerged as essential competencies for students to thrive in modern society and the global labour market. These skills encompass digital literacy, critical thinking, problem-solving, communication, adaptability, and cross-cultural collaboration. Employers increasingly seek graduates who can work in virtual teams, leverage digital tools effectively, and engage in continuous learning to remain competitive in a fast-changing world. Consequently, higher education institutions (HEIS) must embrace innovative teaching models that integrate digital technologies with collaborative learning approaches.

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Collaborative Online International Learning (COIL) or Virtual Collaborative Learning (VCL) represents such a pedagogical innovation that facilitates internationalisation and digital transformation in higher education. This model enables students and faculty from different countries to engage in joint academic experiences, regardless of geographical barriers. By leveraging virtual platforms, COIL or VCL promotes cross-border knowledge exchange, intercultural competence, and the development of practical skills needed for the digital economy. These approaches are particularly relevant for regions like the Western Balkans, where physical mobility and international academic collaboration have historically been limited due to economic and geopolitical constraints.

The higher education system in the Western Balkans faces several structural challenges, including limited digital infrastructure, outdated teaching methodologies, and insufficient faculty training in digital pedagogy (European Commission, 2021). Many institutions struggle with integrating digital tools into their curricula, creating disparities in access to quality education. Moreover, cross-border academic collaboration remains low, restricting students' exposure to international learning experiences. Addressing these challenges requires a strategic shift toward virtual learning models that can bridge these gaps and enhance educational outcomes.

This chapter explores how COIL/VCL can serve as a catalyst for educational transformation in the region, addressing both the challenges and opportunities associated with its implementation.

The Importance of 21st-Century Skills in Higher Education

21st-century skills refer to a set of competencies that are crucial for students to successfully navigate the demands of the modern workforce and an increasingly interconnected world (Trilling & Fadel, 2009). These skills go beyond traditional subject knowledge and emphasize critical thinking, adaptability, technological proficiency, and collaboration. In higher education, fostering these skills is essential to prepare students for lifelong learning, innovation, and problem-solving in diverse professional settings (OECD, 2018).

In the Western Balkans, where economic and political challenges have historically limited access to high-quality education and international mobility, integrating 21st-century skills into higher education curricula can help bridge these gaps (European Commission, 2021). By

emphasising digital literacy, communication, problem-solving, and intercultural competence, universities can better equip students for dynamic work environments and rapidly changing job markets.

Key Competencies

Digital literacy is the ability to effectively use digital tools and technologies for communication, learning, and professional tasks (OECD, 2018). It includes skills such as information literacy, online collaboration, cybersecurity awareness, and the responsible use of technology. In higher education, digital literacy enables students to engage in online research, participate in virtual learning environments, and develop proficiency in digital communication platforms (European Commission, 2021). The increasing reliance on online education, particularly in regions like the Western Balkans, underscores the need for students to develop these competencies to fully benefit from virtual and collaborative learning experiences (Bijnens et al., 2006).

Critical thinking involves analysing information, evaluating different perspectives, and making informed decisions (Trilling & Fadel, 2009). In a rapidly changing world, students must be able to assess complex issues, identify solutions, and adapt to new challenges. *Problem-solving* skills complement critical thinking by enabling students to apply knowledge in practical situations (OECD, 2018). In regions like the Western Balkans, where labour markets are evolving due to digital transformation, graduates with strong analytical and problem-solving skills are more prone to succeed.

Effective communication is a fundamental skill in any professional setting, but it becomes even more critical in virtual and international collaboration (Schoop et al., 2020). *Virtual teamwork* requires students to develop strong written and verbal communication skills, engage in online discussions, and work cohesively in remote teams (Bijnens et al., 2006). Given the challenges of international collaboration in regions like the Western Balkans due to mobility restrictions, virtual learning platforms provide an opportunity for students to enhance their teamwork and communication abilities while working on cross-border projects (European Commission, 2021).

The fast-paced nature of the modern economy demands that individuals continuously update their skills and knowledge (OECD, 2018). *Self-directed learning* encourages students to take responsibility for their education by setting learning goals, seeking resources, and evaluating

their progress (Trilling & Fadel, 2009). *Adaptability,* on the other hand, refers to the ability to embrace change and thrive in new environments. Both skills are crucial for students, especially in regions like the Western Balkans, where access to high-quality education and career opportunities may be inconsistent.

Intercultural competence is the ability to interact effectively with individuals from diverse cultural backgrounds (Schoop et al., 2020). As globalisation continues to shape education and employment, students must develop an awareness of different cultural perspectives and communication styles (OECD, 2018). In regions like the Western Balkans, which have diverse ethnic and cultural identities, fostering intercultural competence can contribute to social cohesion and cross-border collaboration.

How COIL/VCL Fosters These Skills

COIL or VCL methodologies play a pivotal role in fostering 21st-century skills by creating interactive and collaborative learning experiences. These approaches enable students to develop digital literacy by utilising online tools, engage in critical thinking by working on real-world problems, and refine communication skills through virtual teamwork. Additionally, COIL or VCL encourage self-directed learning by allowing students to take ownership of their projects while promoting intercultural competence through cross-border collaborations.

For students in regions like the Western Balkans, COIL or VCL offers unique opportunities to gain exposure to international academic and professional networks without the need for physical mobility. These virtual exchange programs bridge geographical and financial barriers, providing students with access to diverse perspectives, global challenges, and collaborative problem-solving experiences (OECD, 2018). By integrating these methodologies into higher education curricula, institutions can enhance students' readiness for the digital economy and improve their competitiveness in the global workforce.

The Western Balkans Higher Education Context: Needs and Challenges

The Western Balkans, a region comprising Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, has undergone significant educational reforms in recent years to align with European Higher Education Area (EHEA) standards (European Commis-

sion, 2021). However, despite efforts to modernise higher education, many structural and systemic challenges persist. The region's universities struggle with issues such as outdated curricula, limited digital infrastructure, and a lack of international mobility for students and faculty (OECD, 2018). The Bologna Process has played a critical role in promoting higher education reform in the region by standardising degree structures and credit systems (Rampelt et al., 2019). Nevertheless, disparities in implementation continue to hinder the effectiveness of these reforms. Moreover, higher education institutions face significant financial constraints, affecting their ability to invest in digital transformation and international collaborations.

Major Challenges

Limited Digital Literacy levels remain a key challenge to the digital transformation of the Western Balkans. The region requires both time and resources to align with the EU's 'Gigabit Society' 2030 targets. According to the *Balkan Barometer* (Regional Cooperation Council, 2020), there is a pressing need to integrate digital skills more effectively into the education system, although awareness of digitalisation's potential is steadily increasing among residents. Despite the fact that today's students belong to Generation Z – often referred to as digital natives who have grown up in an era of rapid technological advancement – higher education institutions (HEIS) in the Western Balkans have largely failed to adapt. Many universities and academic staff continue to rely on traditional teaching and learning models, limiting the integration of modern digital methodologies into higher education.

One of the primary challenges facing Western Balkan universities is *limited participation in international academic collaborations* (European Commission, 2021). Due to economic constraints, political instability, and institutional barriers, many students and faculty members have limited opportunities to engage in exchange programs or collaborative research initiatives. This lack of international exposure restricts students' ability to develop global competencies and diminishes the region's competitiveness in higher education rankings.

While digital transformation is accelerating worldwide, the Western Balkans still faces significant *technological barriers* and disparities (OECD, 2018). Limited access to high-speed internet, insufficient investment in digital learning infrastructure, and outdated IT resources pose major obstacles to integrating online education and virtual col-

laborative learning. The digital divide is more pronounced in rural areas, where students have fewer opportunities to engage with online educational resources, further exacerbating inequalities in higher education access (European Commission, 2021).

Traditional teaching models and resistance to change are among the challenges, too. Many higher education institutions in the region still rely on traditional, lecture-based teaching models that limit student engagement and interactive learning. Faculty members often lack training in modern pedagogical methods, making the transition to student-centred, digital learning approaches challenging. Resistance to adopting virtual collaborative learning methods persists due to institutional inertia and a lack of incentives for faculty to incorporate innovative teaching practices (OECD, 2018).

The *shortage of faculty training* programs on digital teaching methodologies remains a significant barrier to educational modernisation (Vladi et al., 2021; European Commission, 2018; 2021). Many educators are unfamiliar with COIL and VCL techniques, limiting their ability to effectively facilitate online learning and without adequate professional development opportunities, faculty members struggle to implement new technologies and adapt their teaching methods to suit digital and collaborative learning environments.

Country-Specific Challenges in WB Higher Education

Albania

- *Limited Internationalisation:* Low student and staff mobility, especially low incoming mobility rate (European Commission, 2018).
- *Unpreparedness for Online Learning:* COVID-19 exposed gaps; 64.7% of faculty felt unready for the transition (Vladi et al., 2021).
- *Lack of Digital Education Policies:* No comprehensive national strategy for digital skills or teacher training (European Commission, 2021).
- *Need for Modernisation:* HEIS require innovation and international collaboration to enhance digital education (European Commission, 2021).

Bosnia and Herzegovina

- *Low Digital Literacy:* Only 29% of citizens use the internet for education, highlighting weak digital adoption (Regional Cooperation Council, 2020).

- *Slow Curriculum Reform:* Bureaucratic and political complexities make it difficult to update university curricula.
- *Weak University-Industry Collaboration:* Poor ties between HEIS and the private sector hinder tech-driven education.
- *Lack of Virtual Learning Integration:* Virtual collaboration is marginally recognised, and students lack digital skills for academic projects.

Kosovo

- *Limited ICT Integration:* ICT is mainly used for entertainment, with minimal presence in education.
- *Digital Skills Gap:* Senior lecturers struggle with digital adoption, limiting technology use in teaching. HEIS fail to equip students with the digital competencies required by the job market.
- *Weak Industry Alignment:* Universities do not adequately meet the growing demand for digitally skilled graduates.
- *Need for Virtual Collaboration:* HEIS must adopt virtual mobility and exchange programs to enhance connectivity and reduce barriers.

Montenegro

- *Limited Digital Integration:* Despite Bologna Process alignment, digital tools are not fully incorporated into teaching and learning.
- *Lack of Digital Competence:* HEIS face shortages of structured ICT courses, trained faculty, and digital learning resources.
- *Weak Infrastructure:* Insufficient access to computers, electronic textbooks, and subject-specific e-learning materials (UNICEF Montenegro, 2017).
- *Low Adoption of Blended Learning:* University course syllabi rarely include hybrid or digital learning approaches.

North Macedonia

- *Slow Digital Transformation:* While progress has been made in aligning with European standards, digital tools remain underutilised in education.
- *Insufficient Faculty Training:* Many educators lack the necessary training to implement digital teaching methods effectively.
- *Outdated Learning Resources:* Universities face shortages of e-learning materials, digital textbooks, and online course platforms.

- *Weak Industry Collaboration:* Higher education institutions struggle to align programs with labour market needs, particularly in digital sectors.
- *Need for Virtual Learning Expansion:* HEIS must strengthen virtual collaboration, exchange programs, and blended learning models to enhance digital competencies.

Serbia

- *Slow Digitalisation in Education:* Despite advancements in other sectors, digital tools are not fully integrated into higher education curricula.
- *Limited Faculty Training:* Many educators lack the necessary digital skills to implement modern teaching methodologies effectively.
- *Low Virtual Mobility Adoption:* Limited recognition and implementation of virtual collaboration and exchange programs hinder internationalisation efforts.

Policy Gaps and Institutional Constraints

Although efforts have been made to align Western Balkans education policies with European standards, gaps remain in policy implementation and institutional support for virtual learning (OECD, 2018). Universities require more substantial investments in digital infrastructure, faculty training, and international partnerships to fully integrate COIL and VCL methodologies in order to modernise and promote teaching and learning practices with technology-enhanced methods and tools. Furthermore, policymakers must establish clearer guidelines for recognising virtual learning experiences within national education frameworks (European Commission, 2021). Addressing these challenges requires a coordinated effort between governments, higher education institutions, and international partners.

The Potential of COIL/VCL in Addressing These Challenges

How Virtual Collaboration Can Bridge the Internationalisation Gap

One of the key benefits of COIL and VCL is their ability to foster international collaboration without requiring physical mobility (Schoop et al., 2020). Western Balkans HEIS often struggle with limited par-

ticipation in global education initiatives due to financial and logistical constraints (European Commission, 2021). Virtual collaboration provides students and faculty with access to international peers, broadening their academic and cultural perspectives without the need for travel. By integrating COIL/VCL methodologies, universities can increase global engagement and ensure that students gain valuable international experience, thus bridging the internationalisation gap (OECD, 2018).

The Western Balkans face significant disparities in educational infrastructure, with some institutions lacking adequate funding for modernising classrooms and investing in advanced learning technologies. Digital and blended learning models offer a viable alternative by reducing dependency on physical resources and increasing access to high-quality educational content (European Commission, 2021). Virtual learning environments provide students with interactive coursework, real-time collaboration opportunities, and flexible access to global academic resources (OECD, 2018). By implementing digital and blended learning, HEIS can mitigate resource constraints and provide more inclusive education opportunities for students across the region (Trilling & Fadel, 2009).

COIL/VCL as Cost-Effective Solutions for Cross-Border Collaboration

International student mobility programs, such as Erasmus+, often require substantial financial investments that many Western Balkan universities and students cannot afford (European Commission, 2021). COIL/VCL offer cost-effective alternatives that enable cross-border learning experiences without travel expenses (Schoop et al., 2020). These virtual models allow institutions to establish joint courses, collaborative research projects, and shared curricula with international partners, significantly lowering costs while maintaining the quality of international engagement. Moreover, virtual learning experiences can be seamlessly integrated into existing curricula, making them an efficient means of fostering global partnerships (OECD, 2018).

Enhancing Faculty Skills through Training and Digital Tools

A significant barrier to educational innovation in the Western Balkans is the lack of faculty training in digital pedagogy (Vladi et al., 2021). Many educators are unfamiliar with online teaching methodologies,

limiting their ability to facilitate effective virtual collaboration (European Commission, 2021). By implementing structured faculty training programs, universities can equip educators with the skills needed to incorporate COIL and VCL into their teaching strategies. Training initiatives should focus on:

- Integrating digital tools for virtual collaboration.
- Developing online course content and interactive learning activities.
- Adapting assessment methods for virtual environments.
- Enhancing intercultural competencies for effective cross-border teaching.

By investing in faculty development, HEIS can improve the overall quality of virtual learning experiences and ensure that students receive high-quality instruction regardless of geographical constraints.

The Role of Policymakers in Supporting Digital Education Initiatives

To fully realise the benefits of COIL and VCL, policymakers must actively support digital education initiatives through funding, regulation, and institutional incentives. Governments in the Western Balkans should prioritise:

- *Infrastructure Development:* Investing in high-speed internet access and digital resources for HEIS.
- *Faculty Training Programs:* Providing grants and support for professional development in digital pedagogy.
- *Accreditation and Recognition:* Establishing formal policies for recognising virtual learning experiences as part of degree programs.

COIL and VCL provide practical solutions to many of the challenges faced by HEIS in the Western Balkans. By leveraging these methodologies, universities can expand international collaborations, improve digital accessibility, reduce costs, and enhance faculty capabilities. However, successful implementation requires coordinated efforts from educational institutions, faculty, students, and policymakers to ensure sustainable and impactful digital transformation.

Conclusion

This chapter explored the transformative potential of Collaborative Online International Learning (COIL) or Virtual Collaborative Learning (VCL) in addressing key challenges faced by higher education institutions in the Western Balkans. The discussion highlighted the importance of 21st-century skills such as digital literacy, critical thinking, problem-solving, and intercultural competencies. COIL/VCL methodologies provide effective solutions to bridge the internationalisation gap, enhance digital accessibility, and foster cross-border academic collaboration. Despite significant challenges, including limited digital infrastructure, traditional pedagogical approaches, and a lack of faculty training, the Western Balkans has the potential to integrate virtual learning into higher education successfully (European Commission, 2021).

COIL and VCL are more than just technological solutions; they represent a paradigm shift in how higher education institutions engage with global learning opportunities. By fostering international partnerships and integrating virtual mobility into curricula, universities can offer students a high-quality education that is both globally relevant and locally accessible. Furthermore, these methodologies democratize access to international education, reducing the financial and logistical barriers that have historically limited student mobility in the region.

The ongoing digital transformation in higher education underscores the need for long-term commitment to virtual learning models. Higher education institutions must embrace innovative pedagogical approaches and invest in sustainable digital infrastructure (OECD, 2018). Additionally, policymakers must implement regulations that recognise and accredit virtual learning experiences, ensuring that students receive official credit for their participation in COIL and VCL initiatives.

Call to Action for Educators, Policymakers, and Institutions

To fully realise the potential of COIL or VCL in the Western Balkans, a coordinated effort is required among universities, faculty, policymakers, and international partners. The following actions are recommended:

- *For Educators:* Faculty members should actively participate in training programs to develop skills in digital pedagogy and virtual collaboration. By incorporating COIL/VCL elements into their

courses, they can enhance student engagement and foster international academic exchange.

- *For Policymakers:* Governments should develop national policies that support the accreditation and recognition of virtual learning experiences. Increased investment in digital infrastructure and faculty training programs will be essential to scaling COIL/VCL initiatives.
- *For Higher Education Institutions:* Universities should integrate COIL/VCL into their strategic development plans, ensuring that digital learning becomes an institutional priority. Establishing international partnerships and securing funding for technological advancements will further enhance their global competitiveness.

The future of higher education in the Western Balkans depends on the region's ability to embrace digital transformation and international collaboration. By leveraging COIL/VCL, universities can provide students with the skills needed to thrive in a rapidly evolving world, ensuring that higher education remains inclusive, innovative, and internationally connected.

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