

Unleashing Culture and Creativity Power in European Education Processes

Valentina Gianfrate

Alma Mater Studiorum

— Università di Bologna

valentina.gianfrate@unibo.it

ORCID 0000-0003-1529-8041

Marta Materska-Samek

Jagiellonian University

m.materska-samek@uj.edu.pl

ORCID 0000-0002-4432-0933

Abstract

The European educational system stands in a unique position at the crossroads of training, research and innovation, in shaping sustainable and resilient economies, and in making its territories greener, more inclusive and more digital through culture and creativity.

This paper is the result of a one-year collaboration between the Alma Mater Studiorum — Università di Bologna and the Jagiellonian University, under the umbrella of the EIT Culture & Creativity (EIT C&C), in the interim co-chairing of the Direction linked to the Action Program 1 Talent Scaler, to define activities and strategies for the operationalization of the Strategic Objective 1 about Education.

This involvement opened up the possibility to activate a fruitful international cooperation with all the members of Una Europa, the alliance of Europe's eleven largest leading research universities that aim to create a truly European inter-university environment, a University of the Future.

Keywords

European education
Creative skills
Lifelong learning
High Education Institutions
Cultural and Creative Industries (CCI)
Cultural, Creative Sectors and Industries (CCSI)
EIT Culture & Creativity

General Framework

Culture and education form a dynamic and interconnected duo, serving as the cornerstone for personal fulfilment, for the cultivation of transformative abilities and adaptability in the face of the increasingly intricate challenges of our modern world. Education, a fundamental pillar for knowledge and talent development (Thorn et al., 2013), is deeply rooted in the identities and cultural backgrounds of learners, shaping their pathways to the future. Meanwhile, culture enriches the realm of education, infusing it with the richness of cultural heritage, spanning from historical monuments to the living expressions of tradition, museums as knowledge repositories, arts education, and the burgeoning world of Cultural and Creative Industries (CCI).

In line with the United Nations Agenda 2030 for Sustainable Development, as encapsulated in Target 4.7, culture plays an indispensable role in education for sustainable development (ESD) (Laurie et al., 2016). As our societies grow increasingly multicultural, the demand for expanded skills and competences that can effectively navigate the rapidly evolving educational landscape becomes ever more pressing. Education rooted in culture, heritage, arts, and creativity emerges as a vital force in equipping learners to confront the challenges and seize the opportunities of our times, including the realm of digital technologies, and to unlock their full potential (Chatterton, 1999). In response, educators and policymakers are faced with the urgent task of shaping and implementing guidance, policies, strategies, and pedagogical tools that meet the evolving demands for nurturing specific skills and abilities right from childhood.

Moreover, culture and the arts serve as potent catalysts in fostering the most important skills (World Economic Forum, *Future of Jobs Report 2023*) such as cognitive skills, including creativity, critical thinking, and diverse forms of intelligence, thereby enhancing resilience, flexibility and agility. Culture and Arts Education can also accelerate the achievement of the Sustainable Development Goals (SDGs) (UNESCO, 2021), with a particular focus on SDG4 pertaining to education.

In the context of preserving and appreciating culture, both in its tangible and intangible forms, it is imperative that knowledge about history, society, and cultural practices and understanding of ongoing processes are imparted and cherished. This transmission of knowledge and understanding must extend to younger generations through the conduit of schools and educational institutions. Simultaneously, the realm of cultural and creative industries (CCI) is gaining recognition for its substantial contributions to the global economy, creating jobs, businesses, and boosting national gross domestic products (GDPs). Creative skills enable the triple-loop learning process in organisation (Tosey et al., 2012) which is considered a crucial factor for development. The United Nations' designation of 2021 as the International Year of the Creative Economy for Sustainable Development underscores the weight of this sector in economic and social terms and highlights its potential to shape a sustainable future with expanded opportunities for all. To harness and consolidate this sector's growth, it is paramount to impart knowledge and skills in the CCI sector from an early age, embedding them in educational approaches aimed at nurturing talent development, as endorsed by UNESCO.

Europe Calls for Creative Skills

Europe is calling for a just transition, and searching for spaces to advance the role of youth in this process¹, as part of contemporary European society, in which values and identity are increasingly challenged internally and externally by complexity and uncertainty, economic and social crises, a difficult cohabitation with new cultures, the gradual erosion of traditional know-how (including crafts and immaterial heritages) and extreme competition (EIT, 2017).

Culture is expected to contribute to building the pathway towards a new EU Green Deal, as a tangible, human-centred experience supporting sustainability and quality of experience, through creativity and imagination as requested by the New European Bauhaus movement. This transformative process is underway, but the full deployment of the cultural resources is still a distant goal, requiring new innovative steps to be taken by mobilising and training people as drivers for change.

The entire educational system stands in a unique position at the crossroads of training, research and innovation², in shaping sustainable and resilient economies, and in making the European Union greener, more inclusive and more digital.

The *European Skills Agenda for sustainable competitiveness, social fairness and resilience* was launched in 2020 with 12 actions regarding job skills, partnering up with Member States, companies and social partners to work together for change, by empowering people to embark on lifelong learning. The Agenda picks up the legacy of the European Framework on Key Competences for Lifelong Learning (EU Parliament 2006), which for the first time identified and defined at the EU level (Platsidou & Sipitanou, 2014) the 8 basic skills that Modern EU citizens need³ (2018), which include among others social and civic competences, a sense of initiative and entrepreneurship, cultural awareness and expression.

The principal aim has been to set up a multifunctional package of knowledge, skills and values that all individuals need for their personal fulfilment and development, and for their social inclusion and employment. These key competences are developed throughout life, through formal, non-formal and informal learning in different environments, including family, school, universities, the workplace, neighbourhood and other communities. During 2023, defined by the EU commission as the European Year of Skills, transversal competences were integrated, encompassing but not limited to skills for the labour market, as the way forward for the Europe of the future.

Transversal competencies (Whittemore, 2018) can be used in a wide variety of situations in life and at work and represent the right mixture of knowledge, skills, and attitudes that ultimately make better, more active citizens who find fulfilment in their work and are able to adapt to fast-paced changes. Critical thinking, design methods, problem-solving, and digital literacy cut across sectors, fields, tasks, eras and lives. Transversal competences inexorably lead to rethinking validation and guidance processes: how to make those skills more explicit and embed the lessons learned in validation and guidance provisions is a crucial endeavour for the wider education community.

Culture and creativity-driven production of meaning and skills is considered the main driver of a new logic of innovation and

1



2

European Education Area



3



economic value generation, placing the CCI at the intersection of different fields and sectors of the economy and society (Gustafsson & Lazzaro, 2021).

More recently — in connection to a broader expansion of the CCI's literature and policy objectives into the realm of the social — further discourses around the value of the arts and humanities and creative disciplines in the educational sector have emerged beyond the traditional scope and understanding of metrics of accountability, with a strong connection to placemaking and social impact as well.

The policy attention towards CCIs has also gone hand-in-hand with broader structural changes and arguments to redirect work and employment from industrial to post-industrial frameworks, so with broader national transitions in Europe towards service-based, knowledge-intensive, and technologically networked societies.

Within this general framework of changes in the educational, market and economic sectors, the new Knowledge and Innovation Community EIT Culture & Creativity (KIC), launched at the end of the 2022, is the ninth KIC that is working on the growing recognition of the importance of creative and cultural sectors and industries (CCSIs), as an important economic sector as well as a leading employer, as different studies and analyses revealed: Europe is home to 2.3 million students in CCSI BA & MA courses (Eurostat 2022) and to some 9 million CCSI professionals (EIF/KEA 2021).

With regard to education, the EIT C&C focus is on how 'creative education' is provided and valued, what skills are reported as being promoted and developed, along with a consideration of people's experiences and how students contribute to their local communities and wider economies both through and as a result of their education, acknowledging that the connections between education and the creative and cultural sectors are very broad. These connections involve a range of stakeholders with often conflicting interests and encompass a vast range of subjects and target groups that inevitably go beyond the discussion of creative subjects within the European educational system.

The EIT Culture and Creativity Context

EIT Culture & Creativity (EIT C&C) is a resourceful, transdisciplinary and cross-cultural quadruple helix system created to address common global issues of complexity, using a variety of media. The promoted educational pathways [Fig.1](#) will emphasise the human relationship between a variety of actors including student(s), peers and teachers, in a peer-to-peer learning process, train the trainer and collaborative learning between practitioners, businesses and academia, but also in different educational fields, such as long life learning VET, school education, HEI in which diverse perspectives and experiences converge to generate new knowledge and practices. Furthermore, these innovative learning spaces can nurture an entrepreneurial mindset where learners design, co-design, experiment, co-create and critically evaluate educational environments.

This hybrid learning space affords much closer and sustainable transnational cooperation, more effective implementation of joint educational and research activities, lifelong learning and

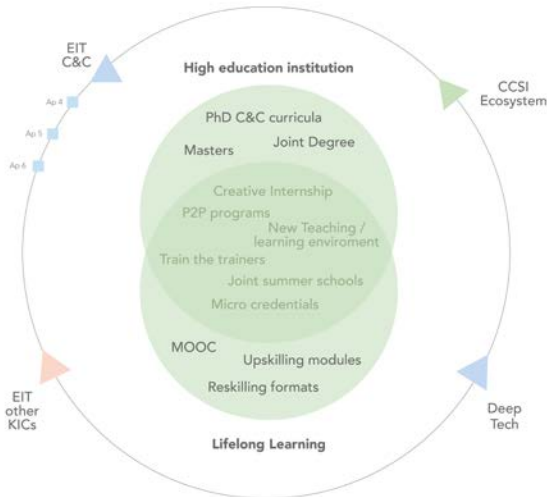


Fig. 1
The educational pathways.

the European Higher Education Area tools, to drive diversity and inclusion. This will feed conventional and unconventional collaboration within the CCSI ecosystems and beyond, with a focus on the most needed skills and competences to face today's economic and societal demands.

Objectives

The EIT C&C strives to embed a culture of lifelong learning amongst the younger generations as they prepare for the transition to work and amongst professionals in the sector to equip them with the skills and competences necessary for a continually and rapidly evolving sector. Future-proofing the sector will be achieved through dynamic challenge-based programs and learning-by-doing methodologies. These programmes will be transdisciplinary, connecting the arts, design and the (social) sciences to enrich the learning experience and drive innovation in teaching and learning. It is anticipated that this will also advance the case for the CCSI as a key pillar in achieving SDGs by demonstrating its role and value in addressing critical global challenges. For example, the role of an art such as social theatre in fostering behavioural change resulting in improved health literacy or climate literacy amongst citizens can contribute to Goals 3 and 4. With regards to Goal 16, the arts can play a crucial role in creating alternative pathways for (young) people at risk of violence: they can be a tool for 'Activism', mobilising social actors to advocate for reimagining and building alternative non-violent futures. The EIT C&C seeks to improve access to education and boost educational achievement across Europe. This includes the relative exclusion of women in Science, Technology, Engineering, and Mathematics (STEM) and boosts the inclusion of underrepresented groups in the CCSI (e.g. people of colour, people with disabilities, people from low socio-economic backgrounds), but also the importance of embracing the Art component in STEM and STE(A)M in Higher Education

(Carter et al., 2021). Furthermore, new pathways for participation through hybrid lifelong learning programmes and micro-credentials will be created for those returning to education and for those with low educational achievement.

The urgency to overcome “siloes” visions between disciplines, sectors, and stakeholders of the CCIs value chain has grown, with the necessity to design new relationships between people, processes, systems, and performance measurement (SDGs 3, 8). Many concrete emerging experiences clearly show how Europe is on the move and is developing the skills needed to give substance to a true cultural and creative cross-fertilization: from smart design for people with special needs to digital culture and service design for bureaucratic simplification, from the contribution of the creative industries to improving healthcare systems to the role of games in science education, etc.

Prototyping Methods and Formats through Ecosystem Design and Cross-fertilization with Immersive Technologies

The methodological approach adopted to support the Talent Scaler process involved two main axes:

- A completion of knowledge regarding the opportunities generated by the Higher Education system in Europe, in terms of networking, innovation processes driven by culture and creativity, transfer capacities through incubation centres and dedicated facilities. These needs were operationally translated into value-based mapping with the aim of creating a community around HEIs capable of activating synergies and orienting the university of the future (Pilot 1);
- An initial field experiment to test possible new interactions between the cultural heritage and innovative immersive technologies, their absorption within educational pathways to allow an analysis of the possible effects of new formats and new collaborations (Pilot 2).

Pilot 1. Co-design the CCSI Ecosystem: The Importance of Networking and Collaboration

During the Start-Up Phase (SUGA) of establishing EIT Culture & Creativity, Una Europa initiated and executed the CCSI Mapping Project with the goal of identifying and mapping actors within the diverse CCSI ecosystems to which the 11 Una Europa Universities belong. The objective was to create a dynamic, fluid, and accessible online map, with a special focus on various cross-sectoral fields related to cultural heritage, including audio-visual, media, gaming, textile, fashion, architecture, and design. The project aimed to identify gaps and deficiencies in these areas and enhance the role of the CCSI through a holistic approach, incorporating the place-based methodology of the KIC innovation model.

The Mapping activity is grounded in interdisciplinarity as a spill-over generator, fostering new forms of knowledge transfer for

innovation. The trilateral exchange between Knowledge, Technology, and Business is promoted by establishing a non-hierarchical space. This facilitates the development of collaborative opportunities to collect and discuss intersectoral innovation, regional and member states' diversity, as well as tools and practices.

The Initial Results

The Mapping activity generated an advancement in the knowledge system of the EIT C&C, in a *network of network* perspective, with the aim of producing:

- A co-designed and replicable methodology to highlight knowledge triangle initiatives, the potential for innovation and the market connections;
- A user-friendly digital tool to collect and archive case histories, but also to bring out into the open possible new members for the EIT C&C, possible spill-over projects, increasing the impact achieved by mixing technologies-science-art and humanities;
- An agile format for a cross-cultural and cross-country collaboration based on data and to co-design a vision for the future that could be integrated in the EIT C&C Strategic Agenda.

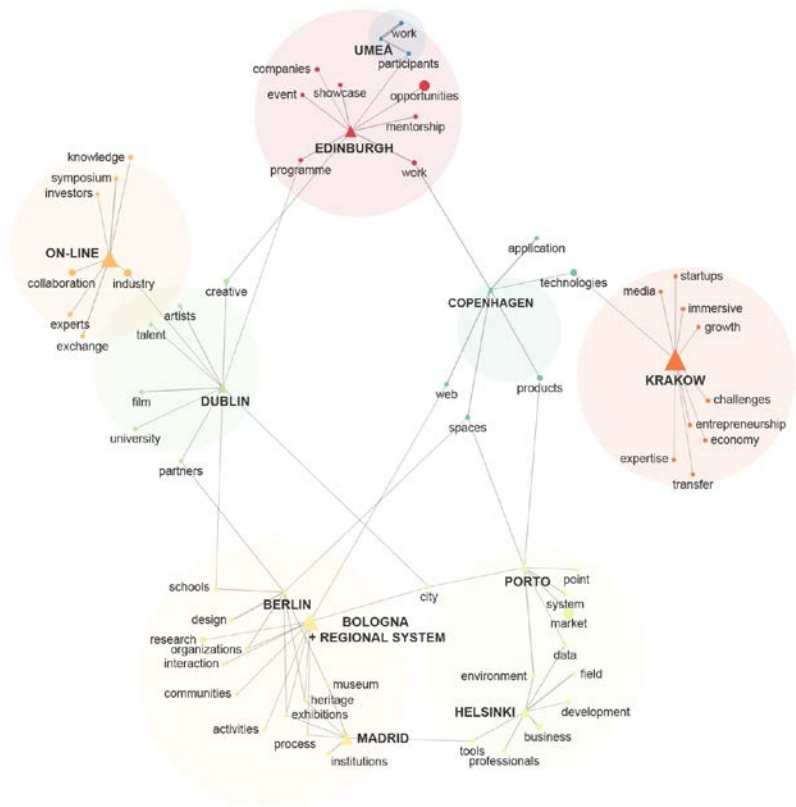
The database, accessible at <https://eitcci.unibo.it/explorer>, visualises the penetration of culture and creativity, transcending disciplinary scientific fields or sectors. The database comprises an open-access repository of case studies and an interactive map that illustrates the interaction between Una Europa and the primary stakeholders in the broader European ecosystem of cultural and creative industries. It serves as a collector of new evidence generated in the project activities, particularly within the 11 Una Europa Universities and territories. The database produces specific taxonomies for case stories to support their areas of investigation, gathering good practices and background knowledge Fig.2.

Pilot 2. The EIT Culture & Creativity Summer School

Within the scope of the SUGA (Start-Up Grant Agreement) phase of establishing EIT C&C, a pilot educational event was conducted. Known as the EIT Culture & Creativity Summer School 2023, it focused on leveraging creative technology to enrich cultural heritage experiences, particularly through eXtendedReality (XR) technology.

The Jagiellonian University, a member of Una Europa and one of Europe's oldest universities, led this educational initiative. The university's expertise in cultural policy, immersive technologies, and cultural management, as well as its leading role in the international research project IMPULSE: IMmersive digitisation: uPcycling cULTural heritage towards new reviving Strategies under HORIZON-CL2-2023-HERITAGE-01-03, contributed to the unique educational value of the event.

The target audience for the Summer School consisted primarily of university students, with a special emphasis on inviting students from Ukrainian higher education institutions due to the war in Ukraine.



The Initial Results

The Summer School explored innovative methodologies, including media production, practice-based learning, design thinking, and co-creation, to investigate the intersection of creative XR technology and cultural heritage. The program aimed to demonstrate how these methods could be used to create unique experiences that blend storytelling, education, and entertainment using both physical cultural artefacts and their digital counterparts.

Throughout the Summer School, participants actively participated in creating prototypes that covered the entire spectrum of interactive virtual reality (VR) production Fig.3, ranging from script development to online VR editing. The following prototypes emerged from the Summer School:

- Queen Jadwiga of Poland
- VR Fashion in Krakow
- VR Murder Mystery
- Cultural Immersion Programme
- Green Dog Walkers

This hands-on exploration encompassed several key stages:

- Creating Interactive VR Scripts: Participants learned the art of crafting interactive VR scripts, focusing on unique narra-

Fig. 2
Taxonomies for case stories to support their areas of investigation.



Fig. 3
The Summer School: participants actively created prototypes that covered the entire spectrum of interactive virtual reality (VR) production.

- tive structures and storytelling techniques specific to virtual reality. The emphasis was on creating immersive and engaging narratives suitable for a VR environment.
- **Pitching:** The prototypes included a dedicated segment for pitching, allowing participants to refine their skills in presenting and advocating for their VR concepts. This phase enabled them to articulate their creative vision and effectively communicate the immersive experiences they aimed to deliver.
- **Filming:** Participants gained practical experience in VR filming, covering technical aspects of content capture that seamlessly translates into a VR setting. This involved learning about 360-degree filming techniques, camera setups, and capturing immersive footage.
- **Editing:** Post-filming, participants engaged in the editing process tailored to VR content, navigating the intricacies of editing within a three-dimensional space to ensure a cohesive and immersive end-user experience.
- **Post-production:** The prototypes also covered the post-production phase, where participants refined and enhanced their VR content by adding effects, optimising audio, and addressing technical or creative challenges that arose during the editing process.
- **Online VR Editor:** A notable component of the prototypes was the exploration of online VR editing tools. Participants gained hands-on experience with platforms that facilitate collaborative editing in a virtual space, emphasising the contemporary trend of decentralised and remote collaboration in VR content creation.

These prototype developments during the Summer School provided a comprehensive journey through the various stages of interactive VR production. Participants not only acquired theoretical knowledge but also had the opportunity to apply their skills in a practical and collaborative setting, contributing to the advancement of innovative and immersive VR experiences.

Overall, the Summer School served the goals of EIT Culture & Creativity by testing the educational format; enhancing knowledge

4
The New European Bauhaus is a creative and interdisciplinary initiative linked to the European Green Deal launched by the EU in 2020 to connect innovation, creativity and design to citizens' quality of life in towns and localities.

and competency, fostering networking and collaboration, and exploring the potential of creative technology in the context of cultural heritage. The Jagiellonian University's expertise and the diverse target group of university students (including the participants from UNA Europa University - UNIBO specialised in fashion design) made this a successful and innovative educational event, aligning with high-impact markets in audiovisual & gaming, architecture & heritage, and design & fashion within the CCSI.

Both initiatives constituted an initial background of knowledge, useful for defining the next steps in an action strategy which, by the specific nature of the cultural and creative sphere, is expected to integrate with other areas of learning, in a process oriented towards the future and towards intercepting the drivers of change and transformation that will sweep Europe in the coming years.

Conclusion and Possible Futures

European culture is a dynamic and evolving concept, rooted in the diversity and distinctiveness of each country, shaped by changing geopolitical patterns. The objective is to address context-specific critical transformations pertinent to a just transition (Sabato & Fonteddu, 2020; Stiftung & Stiftung, 2020) and establish an ongoing community of learners. This community aims to filter and contribute to the discourse on a shared vision of European values.

The EIT C&C represents a great opportunity to cross-fertilize Higher Education (HE) programs and lifelong learning initiatives to equip students and professionals with ethical and inclusive entrepreneurial, tech and interdisciplinary skills, whilst at the same time reflecting the values of the New European Bauhaus (sustainability, aesthetics, inclusion)⁴. It seeks to define its educational content and learning opportunities by recognizing and embracing the hybrid identities of European students. This approach ensures that the curriculum respects local cultures while intertwining them with broader EU cultural patterns. The overarching goal is to progress through creativity, the integration of deep tech, entrepreneurship skills, and fostering a people-centric understanding of the EU just transition. This increased capacity encompasses three levels: awareness, discovery, and choice.

By adopting a perspective that broadens horizons, the EIT C&C aims to forge connections among individuals with diverse backgrounds, cultures, and viewpoints. This interaction fosters critical thinking and encourages the questioning of assumptions, facilitating the analysis of information from multiple perspectives. The result is an enhancement of problem-solving skills, stimulating intellectual growth and creativity.

This first start-up phase laid the foundations to open a reflection around two central themes: *How to up-date learning strategies to face current, unexpected and future challenges with the optimism of creativity? How to create an 'ongoing community' able to take action in the field of knowledge innovation by combining different cultures, research, experiences and practices?*

A first list of possible actions has been developed in collaboration with the AP1 teams, through the investigation of learning

contexts that can integrate different dimensions, objectives and formats: theoretical/practical, physical/digital, adaptive/experiential, collaborative/open-ended, applicable and experimental on a small territorial scale, but also in an international perspective, by heterogeneous groups of people (teachers, students, citizens, companies, etc.) with the aim of driving a rethinking process about how learning and educational frameworks, methods and tools can prepare future Europeans in the construction of their own critical thinking through curricular activities, interdisciplinary (EUA, 2019), multi-actor experiences and the dynamics of different contexts:

- 1 To upskill, reskill and develop competences to prepare students and professionals for resilient careers that will result in increased growth, innovation and prosperity for the sector as a whole.
- 2 Increase access to high quality training in the sector through EIT Labelling and micro credentials.
- 3 Generate new pathways for holistic training and continuing education for professionals in the sector.
- 4 Create and test new models for teaching, learning and doctoral training to boost capacity-building in entrepreneurship and innovation in the HE and VET sectors, overcoming the constraints dictated by statutes and regulations to open up to cooperation, interdisciplinarity.
- 5 Embed a culture of lifelong learning whereby learning is understood as a continual and dynamic process throughout one's career.

The Strategic Agenda of EIT Culture and Creativity, along with cross-KIC actions, provides diverse opportunities to unleash the power of culture and creativity in European educational processes.

The Strategic Education Cluster, a Cross-KIC collaboration, aims to integrate educational activities from different KICs, creating joint offerings and expanding opportunities for innovation and market penetration.

Several cross-KIC initiatives contribute to this goal:

Deep Tech Talent Initiative: this pan-European program, intending to equip one million individuals with deep tech skills, plays a pivotal role in the green and digital transition in Europe.

The Girls Go Circular targets education and awareness, providing training and resources to challenge gender stereotypes in STEM (Science, Technology, Engineering, and Mathematics) fields, promoting inclusivity and diversity.

EIT Campus serves as a comprehensive platform for all education resources published by the KICs. It plays a crucial role in enhancing market penetration for KICs' educational resources, reaching a broader audience, and accelerating the acquisition of skills for the green economy.

EIT's HEI Initiative: the Innovation Capacity Building for Higher Education action supports higher education institutions by providing expertise, coaching, access to the European Institute of Innova-

tion and Technology (EIT) innovation ecosystem, and funding. This initiative aligns with the EIT Strategic Innovation Agenda 2021–2027, focusing on developing innovation action plans tailored to the needs of individual higher education institutions.

RIS Cross-KIC Programmes: programs such as EIT Jumpstarter, connected to Regional Innovation Scheme (RIS) countries, contribute to strategic regional innovations. This involves supporting local entrepreneurs, creating opportunities for development in countries and regions classified as emerging or moderate innovators on the European Innovation Scoreboard.

These initiatives collectively aim to integrate, innovate, and advance education, aligning with market needs and fostering strategic regional innovations for a more dynamic and inclusive European landscape.

However, modernising education to unleash the power of culture and creativity is a multifaceted challenge influenced by interconnected factors. Deep-rooted traditions and structures, such as standardised testing and traditional classroom setups, create resistance to innovative approaches. Bureaucracy and extensive regulations within educational institutions impede quick adaptation to new methods and joint programmes, requiring navigation through layers of administrative procedures.

Adopted on 16 June 2022, the Recommendation by the Council of the European Union (EU) on a European approach to micro-credentials for lifelong learning and employability (CoE, 2022) enables micro-credentials to play a significant role in introducing new content in education by offering a flexible and targeted approach to skill acquisition. They provide a versatile, targeted means to assist individuals in developing the knowledge, skills, and competences required for their personal and professional growth. The EIT Culture & Creativity can utilise micro-credentials as rapid forms of education, training, and testing fields for components of joint programs such as the Joint MA or Joint Phd. They also have the potential to offer educational and training opportunities to a broader range of learners, introducing and testing financial sustainability mechanisms on smaller formats.

Valentina Gianfrate
Associate Professor of Service Design at University of Bologna. Her fields of expertise: advanced design approach to support urban transformations, design for preparedness and people autonomy. She is involved in international projects and in educational cross-city programs about design for responsible innovation.

Marta Marteska-Samek
Associate Professor at Jagellonian University, experienced ICT and creative sector project leader. Expert in the film industry and project management. Author of studies, reports and publications on, among others, cinema, children's film market in Poland and tools for financing culture.

References

- Carter, C. E., Barnett, H., Burns, K., Cohen, N., Durall, E., Lordick, D., Nack, F., Newman, A. & Ussher, S. (2021). Defining STEAM Approaches for Higher Education. *European Journal of STEM Education*, 6(1), 13. <https://doi.org/10.20897/ejsteme/11354>
- Chatterton, P. (1999). The cultural role of universities in the community: Revisiting the university – community debate. *Environment & Planning A*, 32, 165-181.
- EIF/KEANET. (2021). *Market Analysis of the Cultural and Creative Sectors in Europe*. <https://keanet.eu/wp-content/uploads/ccs-market-analysis-europe-012021 EIF-KEA.pdf>
- European Institute of Innovation and Technology. (2017). *Potential Future EIT Thematic Areas—Input to the EIT Strategic Innovation Agenda 2021–2027*. Budapest, Hungary.
- European University Association. (2019). *EUA Study: The Role of Universities in Regional Innovation Ecosystems*. social-europe.eu/wp-content/uploads/2020/08/Just_Transition_dossier.pdf
- European Education Area. (2022). *A European approach to micro-credentials*. <https://data.consilium.europa.eu/doc/document/ST-9237-2022->
- Eurostat. (2022). *Tertiary education statistics*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tertiary_education_statistics#Participation_by_level
- Gustafsson, C., & Lazzaro, E. (2021). The Innovative Response of Cultural and Creative Industries to Major European Societal Challenges: Toward a Knowledge and Competence Base. *Sustainability*, 13(23), 13267. <https://doi.org/10.3390/su132313267>.
- Holm-Nielsen, L., Thorn, K., Dorup Olesen, J. & Huey, T. (2013). Talent development as a university mission: the quadruple helix. *Higher Education Management and Policy*, 24(2), 99-113. <https://doi.org/10.1787/hemp-24-5k3w5pdwdzjg>
- Laurie, R., Nonoyama-Tarumi, Y., Mckeown, R., & Hopkins, C. (2016). Contributions of Education for Sustainable Development (ESD) to Quality Education: A Synthesis of Research. *Journal of Education for Sustainable Development*, 10(2), 226-242. <https://doi.org/10.1177/0973408216661442>
- Platsidou, M., & Sipitanou, A. (2014). Exploring relationships with grade level, gender and language proficiency in the foreign language learning strategy use of children and early adolescents. *International Journal of Research Studies in Language Learning*. https://www.researchgate.net/publication/262724232_Exploring_relationships_with_grade_level_gender_and_language_proficiency_in_the_foreign_language_learning_strategy_use_of_children_and_early_adolescents#fullTextFileContent[accessed Dec 01 2023].
- Sabato, S., & Fronteddu, B. (2020). A socially just transition through the European Green Deal? *ETUI Research Paper - Working Paper 2020.08*. <https://ssrn.com/abstract=3699367> or <http://dx.doi.org/10.2139/ssrn.3699367>.
- Stiftung F., & Stiftung H. B. (2020). *Just Transition. A Social Route to Sustainability*. Social Europe.
- Tosey, P., Visser, M., & Saunders, M. N. (2012). The origins and conceptualizations of 'triple-loop' learning: A critical review. *Management Learning*, 43(3), 291-307. <https://doi.org/10.1177/1350507611426239>
- UNESCO (2021). *A Framework for Culture and Arts Education*. <https://unesdoc.unesco.org/ark:/48223/pf0000376144>
- Whittemore, S. T. (2018). *Transversal Competencies Essential for Future-proofing the Workforce*. White Paper, Skillalibrary
- World Economic Forum. (2023). *Future of Jobs Report*. <https://www.weforum.org/publications/the-future-of-jobs-report-2023/>

