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Entrepreneurship and Sustainability Education for Economic Reconstruction

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Abstract

The importance of sustainability and entrepreneurship education as a way of developing a country and its particular value in enabling economic redesign and reconstruction processes through an entrepreneurial mindset is highlighted in this study. The world economies are facing significant challenges as they try to support the transition towards more sustainable economic and business models. However, wars and enhanced political instability and conflict can severely affect the transition process. Therefore, examining the role of business education and, more specifically, the role of business schools in integrating and supporting the development of skills and competencies that align with our contemporary society and the needs of creative thinking to help offering alternatives that support reconstructing the socio-economic and environmental systems of countries' facing the severe effects of wars and ongoing violent conflicts is needed. To provide practical recommendations to help on the economic recovery and reconstruction process of countries, the educational sector is identified as a critical player. This study considers the case of Ukraine where we argue on the need to facilitate and promote educational cooperations and collaborations that help the country to reconsider its future business and economic model.

Keywords: Economic Reconstruction, Entrepreneurship Education, Sustainability, Ukraine

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1   INTRODUCTION

Today, entrepreneurial education focuses on the development of critical competencies, including entrepreneurial self-efficacy, system thinking, problem-solving, innovation, and interdisciplinarity (Hermann et al., 2022; Obrecht et al., 2016; Karlusch et al., 2018). But in the circumstances of war and conflicts, the economy can be severely affected by people's direct losses, deportations and migration (Novikova et al., 2022). Additionally, universities and educational systems are severely affected as a result of the territory's occupation, the displacement of academic and administrative staff, and significant disruptions to support educators, learners, and researchers. The role of universities during and after wars, as an entity changes (Petrushenko et al., 2023), as they contribute to the processes of education, human rights, and peace and democracy, but also, they are critical to provide learning and training environments that equip learners with required skills and competencies that support economic progress.

Critical elements to be considered relate to the significant disruptions faced by the Ukrainian Educational Sector, and in particular Higher Education Institutions that are affected by Ukrainian academics and researchers' displacement as they have been forced to migrate. As a result, Ukrainian universities are experiencing a high level of pressure resulting from the full-scale of war; where we underline the importance of nurturing and fostering opportunities for international collaboration and knowledge exchange processes that help in the creation of new teams, which will be beneficial to help on the country's restoration. The main aim of team collaboration is to share knowledge, provide new experiences, and support colleagues in the search for practical, effective, trustworthy, and successful ways to restore the country (Kaplan, 1963; Tuckman, 1965; Tuckman, 1977). However, forming effective and cohesive working teams is a complex process, consisting of four stages: dependency, fight, trust and work, and termination. The identified stages will be subject to significant challenges before reaching the productive stage, as working team members will need to navigate a series of conflicts where negotiation, communication and compromising skills emerge as critical to help collaborative working teams navigate the outlined and additional potential issues (Gersick, 1991). Despite all the complexity of team formation, we argue on their value as working as part of a team allows team members to consider the unpredictability and complexity of the environment and achieve unexpected outcomes as individual contributions can be enhanced by collaborative work due to the

different knowledge and skills that diverse teams offer when working under complex situations and systems.

This paper examines the value of entrepreneurial programmes due to the significance of small and medium-sized enterprises within the European context, which can be critical in reconstructing the Ukrainian economic system. The next section provides further insights on Entrepreneurship Education resulting from a comprehensive review of the Technological University Dublin Virtual Learning Environment (VLE) and its programme catalogue to help map existing programmes and modules supporting entrepreneurship education and their importance to support economic development and that will help in outlining some recommendations and critical insights to support countries that are facing a process of economic reconstruction.

2   TU Dublin Entrepreneurship Education

Sustainability could be identified as a potential response to help rethink the possible University's role as an entrepreneurial entity and how it can offer support and be identified as a place for protecting human rights and democracy. This section examines the entrepreneurial educational environment offered by the Faculty of Business at Technological University Dublin, in the Republic of Ireland. The newly created University emerged as the first Technological University in the country where Dublin Institute of Technology, Institute of Technology Blanchardstown, and Institute of Technology Tallaght amalgamated on the 1st of January 2019, leading to the first public technological University in the country. The history of the University dates back to 1887 with the foundation of the City of Dublin Technical Schools. The University structure has undergone a significant organisational design process. Today, the Faculty of Business includes six Schools (TU Dublin, 2023): The School of Global Business, the Graduate Business School, the School of Marketing and Entrepreneurship, the School of Management, People and Organizations, the School of Business Technology, Retail and Supply Chain and the School of Accounting, Economics and Finance. The Faculty of Business is an essential network of more than 6,000 students and 300 lectures. It is characterised by applying best practices in teaching, learning, and research and defined by a teaching and learning model characterised by its proximity to its students. The programmes offered by the Faculty include all levels and lengths, from short CPD courses to doctorate level, in close cooperation with industry, governance, and society to ensure that students are well prepared and equipped with all required skills and expertise to be highly competitive in the labour market.

TU Dublin Faculty of Business's entrepreneurial educational offer addresses new business requirements by providing high-quality education and making efforts to keep its educational offer updated and connected to industry needs. The core research findings indicate that TU Dublin has a generous offer of entrepreneurial programmes, from a short learning intervention for continuous professional development (CPD) to workshops, internships, and competitions. Moreover, the University's educational offer extends to postgraduate education with established Higher Certificates, Diplomas, Masters, and doctoral programmes emphasising the importance of sustainability and the United Nations 2030 agenda well integrated into its educational offer. A wide range of modules are well represented in the University Virtual Learning Environment (VLE) Brightspace, which covers the development of a wide range of entrepreneurial skills. The exploration of the different programmes is affecting by some limitations, as the exploratory exercise using search options through Brightspace did not enable covering the university Moodle system, which results in potential programmes not being identified as part of the study.

Overall, the development of entrepreneurial programmes, curriculum revision, continuous professional development for staff, and attraction of students has become a high priority for all third-level institutions in Ireland and at the global level. TU Dublin is one of the leading Irish universities with a clear vision to provide high-quality entrepreneurship education, and it has a well-established and demanded range of programmes. The University is in alignment with the Irish National Action Plan 2022-2028 (HEA, 2021), the European Commission, and TU Dublin Strategic Intent 2030 (Strategic Intent, 2022), aiming to become the largest provider of lifelong programmes accessible for everyone with further development of alumni engagement. However, adequate and up-to-date Entrepreneurial Education (EE) remains a concern regarding how current entrepreneurial education can help address Ireland's entrepreneurial sector sustainability challenges and how it can help diversify the country's dependency on the activities of large multinationals (Ghobakhloo et al., 2021). The following sections will analyse the importance of promoting education for Sustainability in HEIs and identify the essential link between entrepreneurial education and sustainability challenges.

2.1 Mapping Entrepreneurship Education at TU Dublin

The first step to revising existing entrepreneurial programmes was based on a simple search on the main page of the TU Dublin website. The keywords used for the search were *"entrepreneurial"* and *"entrepreneurship"*. The manual website search of the programmes revealed that the Faculty of

Business runs 146 different programmes, with 69 representing undergraduate: 56 Bachelor programmes and 13 Certificates and Diplomas, and 77 postgraduate programmes, including 64 Masters programmes and 13 Certificates and Diplomas. The School of Marketing and Entrepreneurship mainly represents entrepreneurial programmes in close collaboration with the Graduate Business School. The research continued with a dedicated analysis of entrepreneurial programmes throughout the University Akari curriculum software. As a result, the following programmes were identified:

-       Masters in Business and Entrepreneurship;

-       Entrepreneurship and Innovation (for women);

-       Digital Entrepreneurship;

-       Design Thinking, Entrepreneurship and Innovation.

Each programme offers 5 to 14 modules, as illustrated in Table 1, and the available educational offer covers all essential knowledge and skills to run a business successfully. Some modules are interconnected in the different programmes and are made up of the foundation of entrepreneurial knowledge and skills.

Title	Modules	School
Design Thinking, Entrepreneurship and Innovation	6	Marketing and Entrepreneurship
Digital Entrepreneurship	5	
Entrepreneurship and Innovation (for Women)	6	
MSc Business & Entrepreneurship	14	

Table 1. Entrepreneurial programmes at the School of Marketing and Entrepreneurship Source**:** Authors (Adapted from TU Dublin Website and VLE, 2023)

Modules like Creativity and Design Thinking were identified as compulsory for all programmes, highlighting the importance of a creative mindset that fosters the development of critical skills that contribute to the development of an Entrepreneurial mindset. At the same time, Agile Project Management, Disciplined Innovation Process, Personal Entrepreneurial Capital, and Venture Validation are obligatory for three out of four programmes, as illustrated in Fig. 1 below.
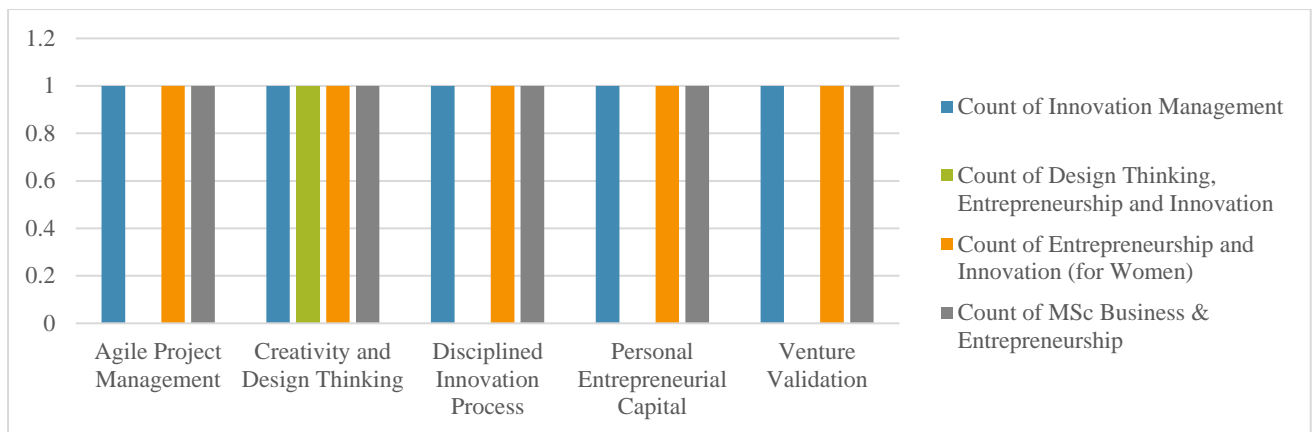
Figure 1. Interconnected modules in the Entrepreneurial Programmes. Source: Authors (Adapted from TU Dublin Website and VLE, 2023)

The programmes aim to give participants practical business planning, situation analysis instruments, and relevant skills to design a business development plan. This enables them to contribute as a start-up creator or to identify entrepreneurial possibilities in existing businesses. The offered programmes align with the curriculum requirements of entrepreneurial programmes aiming to develop critical thinking, problem-solving, risk-taking, and innovation (Iqbal et al., 2022). Critical thinking in the EE context encourages students to move from *"knowing"* to *"thinking"* and *"problem-solving"* – the ability to find solutions; risk-taking is an ability to act despite unforeseen circumstances, while innovation is concerned about putting an idea into practice (Badawi et al., 2019). Regarding teaching methods and delivery approaches, EE combines lectures, case studies, and simulation practices (Schultz et al., 2022), which might offer a well-balanced theory-practice approach. The research findings outline an initial working framework that could be considered when looking at the need for economic restoration of Ukraine and how to support the development of a resilient industrial sector that fosters entrepreneurial activity that will be critical to help the country's economic healing process.

Apart from the programmes mentioned earlier, TU Dublin *"helps to explore the opportunities through growth thinking and entrepreneurial behaviour"* (TU Dublin, 2024) through its GROWTHhub project. The University GROWTHhub intends to work with all students and staff to open new possibilities in growth thinking and entrepreneurial courses designed to facilitate the implementation of different types of social, green, and digital entrepreneurship skills and competencies. The project aims to provide robust support to every TU Dublin student and staff members, aiming to encourage entrepreneurial thinking, network design skills, and starting and running new businesses by integrating new educational approaches and techniques. Thus, GROWTHhub provides additional support to students and

academics as it seeks to offer and develop entrepreneurial skills directly by embedding cutting-edge teaching curricula and technologies into the EE. The primary goal is achieving deep engagement in entrepreneurial skills development by fostering collaboration among students, researchers, staff, and industry representatives and promoting innovative approaches.

The findings indicate that current courses cover many required skills and competencies, including design thinking, innovation, project management, and new product development, that are closely connected with the needs and demands of the corporate world, while nurturing the development of transversal skills and personal competencies in alignment with the challenges posed by Industry 4.0 and 5.0. However, the University's Faculty of Business can offer various possibilities, starting from short workshops, continuing professional development, and leading to postgraduate education up to the Master and doctoral levels. The outcomes offer interesting insights to the Ukrainian Higher Education Sector with regard to entrepreneurship educational practices and how they could be considered to support an educational offer that supports and facilitate the reconstruction of the country business network. The following section provides insights examining students' voices and their understanding of sustainability education, which are identified as important elements within proactive and dynamic learning ecosystems that help learners become more integrated as part of a thriving academic and researcher community.

3   Sustainability Education to Support Doctoral Studies

The research study progressed with the analysis of Sustainability Education at the University Faculty of Business. This phase of the study sought to provide an exploratory insight into doctoral students' understanding of sustainability and how it is integrated into their research practices. Doctoral education is identified as essential to economic development due to the value of research and innovation to support sustainable economic development. The data used in this study was collected through a survey conducted by a team of PhD students that sought to examine to which extent their peers understand sustainability. The survey was administered to active PhD students from various disciplines during the 2022/2023 academic year. This survey investigated the significance of addressing students' perspectives to achieve a sustainable future. It emphasised the importance of developing educational systems and models that support and enable individuals to take actions that promote sustainable growth, development, and progress. This study emerges as the first to examine students' understanding of sustainability and evaluate their involvement in sustainability while integrating their voices in

developing and designing education systems that implement sustainable goals in higher education. The research provides a novel approach as doctoral students led the research process based on their own initiative and their interest in understanding to what extent sustainability and entrepreneurial skills can support the development of a more sustainable future. The survey was based on an earlier survey from the Students Organizing for Sustainability SOS 2021/22 survey, which looks into the students' experience of teaching and learning on sustainable development (Sustainability Skills Survey, 2021-22). After simplifying and further developing the questions, the survey was circulated and shared electronically with 90 active doctoral students. The engagement and response to the survey were quite poor as the sample used within this analysis only included nine participants, and one of the participants was one of this paper's co-authors who agreed to participate in the study's pilot phase. As a result, the outcomes from the study are minimal and cannot be generalised, but they are still valuable as provide an initial insight on the importance of sustainability through doctoral students' perspective. The data collection method used in the present study was primarily a survey conducted through Google Docs. Potential participants were invited to participate in the survey via email, which included a summary of the study and a hyperlink to the survey. The survey was designed to facilitate data collection and comparison while avoiding the need for extensive interpretations that might lead to researchers biased approaches.

3.1. Research Sample

The study utilised qualitative methods, which involved a population of identifiable, small, and readily accessible members, making sampling unnecessary. The analysis of the respondents and the sample questionnaire can be found in the appendix. The participants voluntarily responded to the questionnaire with the exception of one participant that was part of the pilot study as already mentioned. The hyperlink used to send the survey facilitated this process by redirecting users to the survey with a single click.

3.2 Respondents background and demographic data

Of the respondents, 56% were females and 44% males. The majority age group was 25 to 34, occupying 78%, as illustrated in Fig. 2 and 3 below. The other age groups were equally represented, with 11% each.
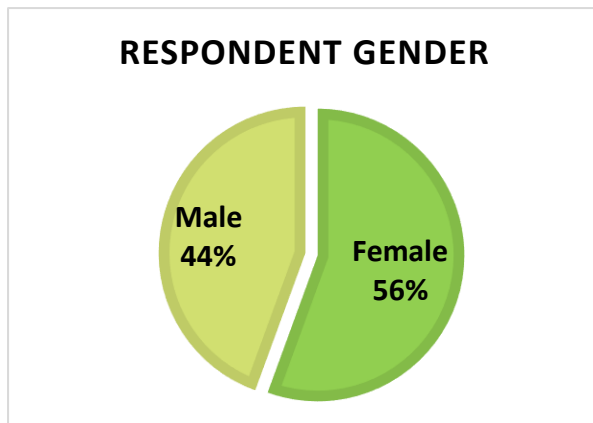
Figure 2. Respondent gender
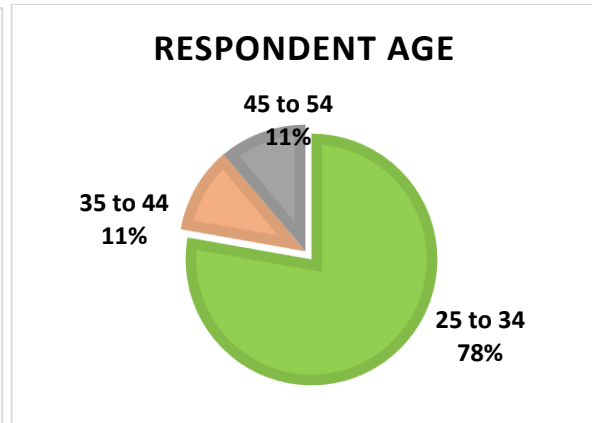Source: Authors (2023)

Figure 3. Respondent age group
Source: Authors (2023)

The research findings provided interesting insights from the attempt to understand the significant motivation for students in completing their doctoral journey. The leading aspiration is a career tenure in academia for four respondents with a motive similar to knowledge sharing and career advancement. Despite these obvious reasons, two candidates identified societal impact and assistance to people as their career choice. These views might help them build impactful careers and work in the sustainability goals achievement framework. It was interesting to identify that at the doctoral level, students do not seem to connect with entrepreneurial skills. This is a relevant finding, as doctoral and research education to support the development of Ukraine might need to consider how to enable connections towards the country's industrial network and ecosystems, required a careful consideration of the value of research and innovation to foster economic development.

3.3 Sustainability Awareness

Education for sustainable development is essential for building a safe future and reacting to challenges people face today (UN, 2015). Despite the comprehensive promotion, various educational interventions and possibilities offered by educational institutions, a question emerges: are we aware of what sustainability is and what goals we should achieve? The analysis of familiarity with the term sustainability shows that almost all respondents know or have heard about sustainability, wherein 67% consider themselves very familiar with sustainability, while 22% are somewhat familiar and 11% are not so familiar, respectively. These results support the idea of further sustainability promotion and embedding sustainable goals into our everyday lives. Besides, half of the respondents perceive

sustainability as a core value and a mission in their lives, while the other half consider the impact of their actions on the future.

The United Nations has developed a very ambitious agenda that identified 17 Sustainable Development Goals, which cover all essential aspects of our planet and life resiliency (UN, 2015). Seven respondents out of nine answered that there are 17 SDGs, showing general awareness of these goals. The top four most known goals are the following: goal 1, no poverty with 14%, 10% equally between goal 2, no hunger; goal 3, good health and well-being; and goal 4, quality education, as per details in Figure 4 below. The results show a vital tendency that, except for the basic needs of avoiding poverty and hunger and having a good healthcare system, education has become an essential fundamental need and is no longer seen as a privilege for the chosen. The results are a good reflection of the University's efforts to communicate the significance of the United Nations Sustainability Agenda and its developmental goals.

Name of the goal	Number	Percentage
Goal 1 NO POVETY	6	14%
Goal 2 ZERO HUNGER	4	10%
Goal 3 GOOD HEALTH AND WELL-BEING	4	10%
Goal 4 QUALITY EDUCATION	4	10%
Goal 5 GENDER EQUALITY	3	7%
Goal 6 CLEAN WATER AND SANITAION	2	5%
Goal 7 AFFORDABLE AND CLEAN ENERGY	3	7%
Goal 8 DECENT WORK AND ECONOMIC GROWTH	2	5%
Goal 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	2	5%
Goal 10 REDUCED INEQUALITIES	2	5%
Goal 11 SUSTAINABLE CITIES AND COMMUNITIES	1	2%
Goal 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	3	7%
Goal 13 CLIMATE ACTION	1	2%
Goal 14 LIFE BELOW WATER	2	5%
Goal 15 LIFE ON LAND	1	2%
Goal 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1	2%
Goal 17 PARTNERSHIPS FOR THE GOALS	1	2%

Figure 4. Respondents SDGs awareness. Source: Authors (2023)

The University is making significant efforts to raise awareness among its students, academic community and relevant stakeholders. Some of the most practical initiatives to help promote sustainable behaviours can be identified in the University initiatives to support schemes, such as cycling to campus, research, and engagement in sustainability initiatives, using less plastic and attempting to fight food waste. The research findings indicate that students' creativity helped them to go beyond and consider that

sustainability should become a part of their mindset and everyday life. Students' creativity and willingness to contribute to the knowledge exchange process are identified as an important element in supporting the reconstruction of Ukraine as the student community can become an active actor in the socio-economic and environmental context bringing value to how the business sector might be redesign and to which extent the connection between businesses and the educational sector can drive the country's economic recovery process.

Overall, the research findings show that the research participants are aware of the sustainability agenda and the necessity of broad actions in promoting and supporting Sustainability within HEIs. Numerous steps have already been taken by HEIs in sustainability implementation, including embedding some components in the curriculum design of some targeted modules delivered at the University. However, it is still necessary to continue this thorough work to create more awareness and provide specific guidelines for action and impact. The research findings provide interesting insights into the importance of connecting the development of entrepreneurial and sustainability skills that will contribute to creating well-informed students as they link their significance to supporting sustainable economic growth and development that are critical skills that need to be considered by countries that are in the process of rebuilding their economic system.

4. ECONOMIC GROWTH AS A BUSINESS DIMENSION

Sustainability awareness is critical for future entrepreneurs as it can contribute to the design and re-design of business activities that ponder the balance between the environment, society and the economy. However, the sustainability agenda is defined by its complexity and significant financial and economic challenges, which requires enormous financial resources that seek to support continuous and consistent economic growth (SDG 8) as a top priority while abandoning other goals (Kuhlmann et al., 2018; Ciarli et al., 2019; Confraria et al., 2024). Entrepreneurs and the business sector need to reconsider their contribution to economic growth and in which way their business agenda can support sustainability efforts, as the model of individual profit maximisation can significantly affect how we understand economic development under situations of heightened conflict and war. In the context of Ukraine, the country's restoration and growth emerge as a priority, leading to potential conflict between the needs of the economy and those of the environment. In a situation when economic processes are heavily disrupted, the focus on labour productivity should be expanded from typical growth as measured

by traditional metrics like Growth Domestic Product (GDP) and how labour productivity is considered and measured (OECD, 2023). Additionally, in economic disruption, investments in the technological sector should become a priority for businesses and governments to achieve economic renovation. As a part of the European continent and a prospective member, Ukraine should aim to grow a number of companies in the technological sector as a driver for the knowledge economy (Iqbal, 2023), which emphasises the importance of human, education, research, technology, and innovation (Powell, 2004). All these factors are critical for environmental sustainability, and they provide a working framework that can benefit collaboration and the knowledge exchange process as countries work together to achieve a more sustainable future (Iqbal, 2023).

The knowledge-intensive economy is affected by many challenges by also significant opportunities that emerge from businesses demands to integrate and embed artificial intelligence, cloud computing, and cyber security widely requiring the exchange of know-how practices through active partnerships and collaborations. The needs of the digital economy were highlighted in the European Industrial Policy, which aims to invest extensively in the company providers of cloud computing services (European Commission, 2020), as data today has become a new business asset. European companies heavily rely on Cloud and edge technologies. However, the leading cloud providers represent the United States and China and occupy 80% of the European Cloud and edge technologies market. To ease dependencies with the USA and China, Europe needs to find qualified and reliable contractors to create its own cloud technologies, and the Ukrainian ICT sector can become an innovator and active player on this sector. Ukraine has highly qualified IT professionals and can explore collaborations with European countries. To achieve this ambitious goal and address its own economic recovery, Ukraine needs to identify funding possibilities, find prospective partners, and create working teams. As a result of the full-scale war in Ukraine, many ICT professionals were displaced across Europe, providing potential opportunities to the development of additional skills and networks that could be beneficial to the country. Furthermore, immersive learning and working experiences facilitated by virtual or augmented reality can help to overcome this challenge, allowing professionals and researchers to collaborate from any place around the world.

PRACTICAL RECOMMENDATIONS

As a country at war with disrupted economic, societal, and educational systems, Ukraine will benefit from the creation of international collaborations among researchers, academics, and students, which can contribute to the country's future socio-economic and environmental restoration. Teams' collaboration and knowledge exchange processes are identified as critical to share best practices and to equip individuals with new experiences and offer valuable support that enables a knowledge exchange process that contributes to rethink Ukraine's economic model. Collaboration between Ukrainian and international researchers will provide a robust background and allow them to bring various expertise, share their knowledge and brainstorm the possible propositions for the country's reconstruction (McKenna et al., 2023; Vanstone, 2013). Considering academics and researchers' displacement around Europe, it is important to consider the challenges that emerge in the formation of efficient teams and there will be affected by physical meetings limitations. However, with mass digitisation and the transition towards blended learning environments, the integration of immersive learning experiences might provide a safer and comfortable space for collaborative activities. Immersive learning allows the creation of a safe and more collaborative learning and working spaces, simulating a real-world environment with the use of avatars instead of cameras where interactions benefit from significant flexibility and quick change of dynamics as Virtual Reality simulations facilitate the integration of different learning and working contexts (Sánchez et al., 2022).

The analysis of entrepreneurial programmes indicates that current programmes cover the skills and competencies that are most demanded by future and existing entrepreneurs, including design thinking, innovation, project management, and new product development. The importance of entrepreneurial education for Ukraine is not limited exclusively by the needs and demands of the corporate world and nurturing personal competencies; it offers insights into the shift of universities' entrepreneurial mindsets towards applying new business models, considering further degrees aligning with the European Union demands, and searching for alliances possibilities.

Quality Education as a sustainability goal was identified as one of the most recognisable and influential among all seventeen goals for building a safe future and reacting to challenges people face today. In the context of the situation in Ukraine, quality education is significantly interfered by the ongoing war, having disrupted many essential links between the educational sector, the economy, society, peace and democratic systems. Therefore, expanding further awareness of the sustainability agenda by

implementing economic and political components into business programmes will equip graduates and will help to support practitioners and entrepreneurs with the necessary knowledge of what needs to be done regarding the roadmap for the country's recovery.

CONCLUSION AND REFLECTION

The research findings outline the importance of supporting the development of entrepreneurial and sustainability skills to help students, businesses, and HEIs navigate a complex reality that puts pressure on the development of new skills and competencies driven by the growing pressing needs of our ever-evolving society. Education for Sustainable Development can help build a link that allows the transition between business models that contribute to the creation of global inequalities and the erosion of our environment towards models that are more attuned to the need for more sustainable practices, as discussed by Kioupi & Voulvoulis (2019). Through this reasoning, the development of the skills needed to make the transition to a sustainable future must be seen within a systemic perspective, in which educational institutions develop a clear vision where Sustainability and Entrepreneurship education are connected as through them, it would be possible to create synergies that contribute to a knowledge multiplier effect that can facilitate the transfer of skills that support transforming individuals to become active social agents as they become more aware of their significant role to support the development of a sustainable socio-economic and environmental model that works for all. The educational context needs to engage in a transformative process that increases awareness of the technological and innovation dimension and its vital role in our common and shared future. In this regard, educators, teachers, mentors, trainers should be able to create adequate conditions for innovation and use of technology according to the needs of their learning environment. Traditionally, our educational approaches offer extrinsic rewards for academic achievements. These aspects negatively impact creative thinking and innovation due to the nature of creativity, which has an intrinsic motivation and involves significant levels of trial and error, resilience and perseverance associated with the knowledge-generation process and achieving specific goals. As a result of the vulnerability of traditional educational approaches, the next generation of pedagogies, for example, the innovative ideas proposed by Circular Pedagogy (Morales, 2022) supporting the interchangeable nature of the roles of the learner, the educator and the researcher will help to facilitate and support the development of human potential that should manifest within classrooms by creating the proper condition for curiosity, creativity and

imagination that will help to identify the alternative and possible solutions in the face of present and future challenges. The following steps can exemplify the road map of this transition through the interaction between educators, learners and researchers:

1. Generation of a participatory vision of sustainability;

2. Enabling conditions for sustainability;

3. Identification of the conditions and skills necessary for citizens to achieve sustainability;

4. Pedagogies to assist in ESD competency development and;

5. Monitoring indicators to assess progress towards sustainability.

This research study provides some initial insights highlighting the importance of Entrepreneurship and Sustainability Education to help support the transition towards more inclusive and diverse societies that work together towards the development of alternative economic models that are more aware of the planet's scarce resources and the need to develop alternative business models that are cognisant of the challenges posed by a continuation of *"business as usual"* practices that could be considered in the context of Ukraine as the country's reassess the needs of its future economic model and the implications for society and the environment.

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Appendix

Student Voice: Students, Sustainability, and Education

Students Survey Questioner:

1. What does sustainability mean to you as a PhD student?

Sustainability for me is a mission and a core value in building my professional career, family, and society resilience, meaning family as an essential part of society.

Sustainability in the research trajectory is a part of my future potential lecturing and research career.

2. In what way/ways do you practice sustainability?

    o   Attend sustainability workshops/seminars.

    o   Cycle to college

    o   Prefer not to answer

    o   Engage in green society initiatives.

    o   Other (please specify)

3. What practice/practices will you recommend to be used in terms of sustainability in research or your Higher Education Institute?

4. In three words, What feelings or beliefs does the word sustainability elicit from you?

5. In your opinion, what is the best definition of sustainability?

    o   Sustainability is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

    o   Sustainability consists of fulfilling current generations' needs without compromising future generations' needs while ensuring a balance between economic growth, environmental care, and social well-being.

    o   Sustainability is living within the limits of available physical, natural, and social resources in ways that allow the living systems in which humans are embedded to thrive in perpetuity.

    o   Sustainability is integrating environmental health, social equity, and economic vitality to create thriving, healthy, diverse, and resilient communities for this generation and generations to come.

    o   None of the above

6. Are you aware of the SDGs (Sustainable Development Goals)?

    o   Yes

    o   No

    o   Other (please specify)

7. How Many Sustainable Development Goals SDGs are there?

- o   3
- o   17
- o   20
- o   10

8. Can you name some examples of the SDGs?

9. Are you familiar with the terms multidisciplinary and interdisciplinary structures?

- o   Extremely familiar
- o   Somewhat familiar
- o   Not so familiar

10. Are you aware if your institute uses SDGs in any multidisciplinary and interdisciplinary structures for research, education, and policy development on sustainability issues?

- o   Yes
- o   No
- o   Other (please specify)

    Interview Questions

1. What does sustainability mean to you as a PhD candidate?

2. What does a student's voice mean to you as a PhD candidate?

3. How important is it for you to have a voice on matters that affect you? Explain.

4. Where do you have a voice now?

5. Does it make a difference to have a Voice? Explain.