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A FRAMEWORK FOR DIGITAL-SELF-LEARNING IN SOCIAL ENTREPRENEURSHIP FOR THE FUTURE OF COLLABORATION BETWEEN UNIVERSITY AND COMMUNITY

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Abstract

This paper introduces a strategic framework for digital self-learning in social entrepreneurship (SE)to enhance collaboration between universities and communities. Drawing on the DigiFunCollab Erasmus+ project (2023-1-IT02-KA220-HED-000158730, https://digifuncollab.eu/), it explores SE ecosystems in Romania, Slovenia, Germany, and Italy, highlighting the need for digital skills and flexible education models. The framework includes multilingual e-learning modules, mentoring programs, and policy recommendations. Higher education institutions play a pivotal role in fostering SE competencies and mindset. The study concludes with actionable strategies to strengthen SE ecosystems across Europe, emphasizing digital learning as a catalyst for inclusive, sustainable development and community engagement.

Keywords

Education/training; digital skills; self-learning; social entrepreneurship (SE); university third mission; university – community ecosystem.

I. Introduction

In the last years (because of the specifics of the post-pandemic period) universities worldwide have been focusing on developing their Triple Helix framework (centered on the dynamic interaction between universities, industry, and government) that serves as a foundational framework for fostering innovation and sustainable development. In the context of university–community collaboration, this model emphasizes the university's evolving role beyond education and research, positioning it as a proactive agent in societal transformation. By engaging with local communities and public institutions, universities can co-create solutions to social challenges, promote entrepreneurial mindsets, and support inclusive growth. The synergy among the three helices enables the development of robust ecosystems where knowledge exchange, digital learning, and social entrepreneurship thrive, ultimately strengthening regional resilience and cohesion. Furthermore, the Triple Helix model plays a crucial role in advancing (SE) by fostering collaboration among universities, industry, and government to address societal challenges through innovation. In this context:

- Universities contribute research, education, and human capital development, nurturing entrepreneurial mindsets and social innovation skills;
- Industry offers practical insights, resources, and scalability for socially driven ventures;
- Government provides policy support, funding mechanisms, and regulatory frameworks that enable inclusive and sustainable entrepreneurship.

This tri-sectoral interaction creates a fertile ground for co-creation, where social entrepreneurs can emerge from academic environments and be supported by both public and private sectors. It strengthens community engagement, promotes digital learning, and builds resilient ecosystems for long-term social impact.

SE has emerged as a powerful approach to addressing complex societal challenges through innovative, market-based solutions that prioritize social impact alongside financial sustainability [1]. The impact of SE companies (as small businesses most of the time) is related to social sustainability aspects and supporting local communities, disadvantaged groups and individuals, combating poverty and creating opportunities [2-4]. Learning and self-learning in the field of SE are extremely complex, and most of the time training and mentoring programs are missing, the initiatives being generated by experienced entrepreneurs or enthusiastic young people who need consultancy. As a result, the need for training is real and urgent, and the need for digital skills to support such businesses is even greater [5-7] and can be supported by e-learning solutions [8,9].

This research examines the current state of SE in Romania, Slovenia, Germany and Italy by analysing key challenges and opportunities, and places special emphasis on the critical need for education in this field. Furthermore, the legal frameworks and financial support systems in each country will be analysed, giving a deep understanding of the SE phenomenon. Furthermore, there will be a debate on the development of SE in Romania that has followed a unique trajectory shaped by the country's post-communist transition, European Union (EU) integration, and ongoing socioeconomic challenges. The situations of supporting SE education will be analysed and recommendations will be provided.

This study will demonstrate the necessity of modern (self-)education in SE, underling the usefulness of the digital skills development by and with the support of higher education institutions. This approach has been implemented in the context of the DigiFunCollab Erasmus+ project (implementing by an international partnership consist of partners from Romania, Slovenia, Germany and Italy) that demonstrates the active role universities could play in their communities and regions. Furthermore, the DigiFunCollab project exemplifies how higher education institutions (HEIs) can go beyond their traditional roles by actively engaging with local communities and public stakeholders to co-create solutions for societal challenges. Through student-led initiatives, mentoring programs, and digital self-learning modules, DigiFunCollab operationalizes the Triple Helix model by integrating academic knowledge, civic engagement, and policy support. This tri-sectoral synergy enables the development of over 50 social entrepreneurship projects across Romania, Slovenia, Italy, and Germany, addressing issues like youth empowerment, environmental sustainability, and cultural inclusion. The model ensures that universities act as knowledge facilitators and social change agents, while industry and government contribute resources, scalability, and regulatory frameworks to sustain impact.

The paper is structured as following: first part presents a comprehensive comparison study of SE in Romania, Slovenia, Germany, and Italy, analysing their legal frameworks and financial support systems; second part will describe the methodological framework proposed for the digital-self-learning courses in SE for the future of collaboration between university and community; the third part is dedicated to the DigiFunCollab case study presentation and debate, including the discussions of the project impact. Finally, some conclusions and recommendations will be included.

II. A comprehensive comparison study of social entrepreneurship in Romania, Slovenia, Germany, and Italy

A. Methodological aspects

SE plays a crucial role in addressing societal challenges across Europe. This study provides a comprehensive comparison of the legal and financial support landscapes for SE in four EU member states: Romania, Slovenia, Germany, and Italy. By examining their distinct approaches to defining, recognizing, and funding social enterprises, this report aims to highlight best practices, identify gaps, and offer insights for policy development and cross-country learning.

The social economy sector, encompassing social enterprises, cooperatives, mutuals, and associations, contributes significantly to employment, social cohesion, and sustainable development. However, the specific conditions under which these entities operate vary considerably across different national contexts, influenced by historical, cultural, and political factors. Understanding these variations is essential for fostering an enabling environment for SE.

This analysis methodology includes several steps as follows:

1. Analysis of the legal frameworks based on an in-depth analysis of how each country legally defines and recognizes social enterprises;

2. The analysis of the financial support systems by a detailed examination of the public and private funding mechanisms available to social entrepreneurs, including the role of

EU-level programs;

3. The comparative analysis synthesis, which presents the findings, identifying similarities, differences, best practices, and existing gaps;

4. Conclusion and recommendations will be made after summarizing key takeaways and proposing actionable recommendations for enhancing the SE ecosystem in these countries and beyond.

This study draws on official government sources, EU publications, and relevant research to provide a robust foundation for its comparative analysis.

B. Comparison of the SE legal framework

Table 1 delves into the legal frameworks governing SE in Romania, Slovenia, Germany, and Italy. Each country has adopted a distinct approach to defining, recognizing, and integrating social enterprises within its national legal system, reflecting diverse policy priorities and historical developments [10-20].

Table 1. Summary of the legal frameworks on SE in the analysed countries

Feature	Romania	Slovenia	Germany	Italy
Specific Legal Framework	Yes (Law on Social Economy, 2015)	Yes (Social Entrepreneurship Act, 2011/2018)	No (National Strategy, 2023)	Yes (Law 381/1991, 2005-06, 2016-17 reforms)

Definition of SE	Yes (Law on Social Economy)	Yes (Social Entrepreneurship Act)	No (No official definition)	Yes (Various laws and reforms)
Legal form of profession and competencies recognition	Specific criteria for recognition	Status-based, not a distinct legal form	No specific legal form	Broad, including social cooperative and others
Benefits and recognition	Public Benefit status, reserved contracts	Free leases, set-aside. procurement, tax benefits, access to finance	Improved framework conditions, support programs	Legal recognition expanded activities, third sector integration
Evolution and maturity	Relatively recent, evolving	Evolving, status-based approach	Nascent, national strategy recently adopted	Well developed, decades of evolution

The analysis in Table 1 highlights the diverse approaches taken by the four countries. Regarding the formal recognition of the SE profession and competence, Italy and Romania have specific laws that define and recognize social enterprises. Italy's framework is particularly mature, having evolved over the course of decades. Slovenia provides a “social enterprise status” that confers benefits without requiring a distinct legal form. Germany, uniquely among the four, lacks a specific national legal framework, relying instead on a recently adopted national strategy and regional initiatives. From the perspective of SE evolution and maturity level, Italy's framework is the most developed, with a long history of legislative evolution from social cooperatives to a comprehensive third-sector reform. Romania and Slovenia have more recent, dedicated legislation. Germany is in the early stages of formalizing its support through a national strategy, indicating a less mature but developing legal landscape.

Regarding the scope and flexibility of SE, while all countries aim to support entities with social objectives, their methods vary. Romania's framework includes specific provisions for “social insertion enterprises”. Slovenia's status-based approach offers flexibility. Italy's broad framework allows various legal entities to qualify. Germany's fragmented approach means that the scope and nature of support can differ significantly across regions.

Regarding integration with broader legal systems, Romania integrates the social economy into social assistance and cooperative laws. Italy has moved towards integrating social enterprises within a comprehensive "third sector" reform, aiming for a unified approach. Slovenia's status provides specific benefits within existing legal structures. Germany's approach is more decentralized, with regional efforts attempting to fill the national gap.

As underlined by the study, the legal landscapes for SE in these four countries present a spectrum from highly formalized and evolved (Italy) to emerging and fragmented (Germany), with Romania and Slovenia occupying intermediate positions with dedicated but more recent legislation. These legal foundations significantly influence the operational environment and the availability of support for social enterprises in each nation.

C. Analysis of financial support systems

The examination of financial support systems available for SE covers both public and private funding sources, as well as the crucial role of EU-level programs that are accessible to all four countries [10-20] (Table 2). The EU-level funding programs available often complement or co-finance national and regional initiatives, providing a crucial layer of financial support and strategic direction across the EU.

Table 2. Comparative analysis of financial support systems

Feature	Romania	Slovenia	Germany	Italy
Public funding sources	Grant schemes (Start-Up Nation), subsidies, reserved contracts	European programs, Fund, Export and Development Bank, SEF	Development Regional authorities (EU funding, guarantees)	Regional National (Invitalia, fiscal incentives, guarantees), Regional measures
Private funding sources	Microfinance (Erste), Crowdfunding	Impact investment funds (FUND2740), Banking sector programs	Social banks, foundations, impact investors, crowdfunding, microdonations, grants	Traditional and social banks (Banca Etica), specialized banks, crowdfunding, microfinance
EU funding access	Yes (ESF+, InvestEU, ESIFs)	Yes (ESF+, InvestEU, ESIFs)	Yes (ESF+, InvestEU, ESIFs)	Yes (ESF+, InvestEU, ESIFs)

Access challenges	Significant, reliance on own funds	Moderate, dedicated funds available	Potential regional disparities	Generally good, diverse options
Innovation in funding	Limited	Moderate (private impact fund)	Moderate (active private sector)	High (specialized social banks, innovative instruments)
Non-financial support	Limited mention	Training, mentorship, networking, and co-working spaces	FASE (resources, advice)	Incubators (FabriQ), mentoring, support organizations

The European Social Fund Plus (ESF+) is a primary EU fund with a substantial budget of €142.7 billion for the period 2021-2027 [18]. Furthermore, the InvestEU Programme is designed to support sustainable and inclusive investments, innovation, and job creation across Europe [19]. A specific component, the InvestEU Microfinance and Social Entrepreneurship Guarantee, aims to bridge funding gaps for micro-borrowers, micro-enterprises, and social enterprises. It includes a dedicated Social Investment and Skills Window with a budget of €2.8 billion in EU guarantees, covering critical areas like education, training, skills development, microfinance, and broader social impact initiatives [20]. European Structural and Investment Funds (ESIFs) represent the EU's main financial instruments for promoting economic, social, and territorial cohesion across its regions [21]. ESIFs include the European Regional Development Fund (ERDF) and the ESF+ (formerly ESF). They are instrumental in investing in job creation, fostering sustainable economies, and supporting social development, with a primary objective of reducing economic and social disparities among EU regions [21].

The synthesis presented in Table 2 illustrates the varied financial landscapes:

- Public vs. private emphasis - While all countries utilize both public and private funding, Italy appears to have the most structured and extensive national public funding apparatus, complemented by a highly diverse private sector. Germany relies heavily on regional and private initiatives due to the lack of a national framework. Romania and Slovenia present a balanced mix, with Slovenia showing a strong reliance on EU programs and dedicated national funds like SEF.
- Access to funding - Romania faces the most significant challenges in funding access, with social enterprises often resorting to self-financing. Slovenia benefits from dedicated funds and a growing ecosystem of support organizations.

Germany's decentralized approach can lead to regional disparities in funding access. Italy's mature ecosystem provides a wide array of options, from traditional banking to innovative social finance instruments, generally indicating good access.
- Role of EU Funds - EU-level programs such as ESF+, InvestEU, and ESIFs are critical funding sources for SE across all four countries. They often complement or co-finance national and regional initiatives, serving as a unifying and significant source of support that transcends national specificities.
- Innovation in funding - Italy demonstrates a higher degree of innovation in private funding, with specialized social banks and impact investment vehicles. Slovenia also has a notable private impact investment fund. Germany's private sector is active in impact investing and crowdfunding. Romania's private funding is present but appears less diversified compared to Italy.
- Non-financial support - Slovenia and Italy show more explicit integration of nonfinancial support (training, mentorship, networking) alongside financial aid, which is crucial for the sustainable growth of social enterprises. Germany has organizations like FASE providing resources and advice, while Romania's non-financial support is less explicitly detailed in the available information.

In conclusion, the financial support systems for SE vary considerably across these four countries, influenced by their respective legal frameworks and economic contexts. EU funds play a vital role in providing a consistent layer of support, but national and regional specificities dictate the overall funding landscape and the ease of access for social enterprises.

D. Gaps and challenges for SE

Related to the legal framework gaps identified, the following aspects were considered important for future developments (synthesis of the previous work of [22-27]):
- The most significant legal gap is Germany's lack of a specific national legal framework for the social economy [3]. While the 2023 National Strategy is a positive step, the reliance on regional initiatives creates potential inconsistencies and unequal access to support and recognition across the country. This fragmentation can hinder the scaling of social enterprises and create legal ambiguities.
- A common challenge across all countries, though not explicitly detailed in their individual frameworks, is the limited mechanisms for cross-border recognition of social enterprise status. This can impede the expansion and collaboration of social enterprises across EU borders, creating administrative burdens and legal uncertainties for organizations operating internationally;
- While social impact is central to SE, the legal frameworks generally lack comprehensive and standardized requirements for impact measurement and

reporting. This gap can hinder accountability, limit the ability to demonstrate the value of social enterprises, and make it difficult for investors and policymakers to assess their effectiveness and allocate resources efficiently.

Related to the financial support gaps, the following aspects have been considered relevant for future developments:

- Romania faces significant gaps in funding accessibility, with a high proportion of social enterprises relying on their own funds for growth [5]. This suggests either insufficient availability of external financing or significant barriers (e.g., complex application processes, lack of awareness, stringent eligibility criteria) that prevent social enterprises from accessing existing public and private programs. This limits their growth potential and sustainability.
- While Germany benefits from strong private sector involvement, the decentralized nature of its public support can lead to regional disparities in funding access and support quality [7]. SE in less economically developed or less proactive regions may face greater difficulties in securing financial resources and non-financial assistance, creating an uneven playing field.
- Across all countries, there appears to be a general scarcity of patient capital and long-term financing instruments specifically tailored for SE; they often have longer payback periods and blended return expectations (social and financial), which traditional financial markets are not always equipped to accommodate. This gap forces social enterprises to seek less suitable funding or constrains their ability to undertake long-term impact projects.
- While some countries (Slovenia, Italy) show good integration, there is often an overall gap in comprehensively combining financial support with essential non-financial capacity building, mentorship, and technical assistance. SEs, particularly early-stage ones, require more than just capital; they need support in business development, governance, impact measurement, and market access to effectively utilize funding and achieve their social missions.

E. Specifics of SE in Romania. Arguments for SE education need

SE in Romania has evolved significantly since the fall of communism in 1989. The social economy sector in Romania has experienced steady growth over the past few years. According to [14], the sector encompasses various organizational forms including associations and foundations with economic activities, cooperatives, credit unions, and certified social enterprises. Furthermore, comprehensive review of SE entrepreneurship in Romania, emphasizing the need for education, is being delivered to the user in the conversation [14]. Additionally, Romania has recognized three professional occupations in the field of social economy: Social Economy Entrepreneur (code 112032), Social Enterprise Manager (code 112036); Social Economy Specialist (code 341206).

The main challenge facing SE in Romania is related to institutional and structural. Several aspects can be considered [10,14]:

1. Despite legislative advances, social entrepreneurs still face bureaucratic hurdles and regulatory uncertainty;
2. Lack of coordination between different policy domains affecting social enterprises (limited policy coherence);
3. Challenges in establishing appropriate governance models that balance social mission with business operations;
4. Jurisdictional confusion between different levels of government and agencies.

An overview of SE education in Romania [14,21,22] showed that there is a critical need for different programs, flexible formulas, such as online or distance learning. The literature consistently identifies significant educational gaps as a fundamental barrier to the development of SE in Romania. These gaps manifest in several critical areas as follows [14,21, 22]:

- Formal education deficiencies because SE remains marginalized in mainstream educational curricula at all levels;
- Skills mismatch since traditional education fails to develop the hybrid skill set required for SE, which bridges business acumen with social impact understanding;
- Mindset limitations because educational approaches often fail to nurture the SE mindset needed for social innovation;
- Limited academic research on SE in the Romanian context;
- Knowledge transfer barriers because of the insufficient mechanisms for sharing best practices and lessons learned.

Considering the above-mentioned arguments and challenges, it has been considered that higher education institutions (HEIs) should play a pivotal role (because of their "third mission") in addressing the challenges facing SE for several key reasons (supported by [14, 21-24]):

1. They can develop hybrid competencies including business and financial management skills, social impact assessment capabilities, stakeholder engagement approaches, ethical leadership practices, systems thinking and complexity management. SE requires a unique combination of skills that traditional educational pathways rarely provide;
2. HEIs can foster the SE mindset is fundamental to social innovation that is not innate, and it must be cultivated. This mindset includes opportunity recognition in social challenges, creative problem-solving orientation, comfort with ambiguity and risk, resilience and adaptability; ethical decision-making frameworks;
3. HEIs should provide their existing knowledge base (as an open resource) on entrepreneurship and social innovation because SE suffers from limited research and documented best practices. HEIs play a crucial role in conducting rigorous research on SE; documenting and disseminating case studies, evaluating impact

measurement approaches, analysing policy effectiveness, contributing to international knowledge exchange;
4. HEIs can create supportive ecosystems of SE (via local, national, international projects and networking). Education extends beyond formal classroom settings to ecosystem development. Modern and flexible educational initiatives can connect aspiring SE with mentors and role models, facilitate networking and collaboration opportunities, provide incubation and acceleration support; link theoretical knowledge with practical application, and create communities of practice for ongoing learning.
5. HEIs must address the unique contextual challenges of SE in different regions of Romania, as follows: post-communist legacy and its impact on entrepreneurial culture; EU integration opportunities and requirement; rural-urban divides into entrepreneurial capacity; specific regulatory and policy environment; local social needs and priorities.

Based on the above-mentioned analysis of the SE in Romania, the following conclusions have been elaborated. SE has shown promising development but faces significant challenges that limit its potential for addressing pressing social issues. Among these challenges, the need for comprehensive education in SE stands out as particularly critical. By developing appropriate educational pathways that combine business acumen with social impact understanding, Romania can nurture a new generation of social entrepreneurs equipped to tackle complex societal challenges. The development of robust SE education requires a multi-stakeholder approach involving HEIs and other educational institutions, policymakers, civil society organizations, and social entrepreneurs themselves. By investing in education that fosters both the mindset and skills necessary for SE, Romania can accelerate the growth of this sector and its contribution to sustainable social and economic development.

Having in mind the results of the comprehensive comparison study of SE in Romania, Slovenia, Germany, and Italy, analysing their legal frameworks and financial support systems, the findings and arguments presented below, in the following will be presented a framework for SE self-skills development that could be considered an example of successful solution implementation with the support of three HEIs from Romania, Slovenia, Italy and a non-governmental association from Germany.

III. The framework for social entrepreneurship self-skills development

A. Background

The framework has been developed in the context of the DigiFunCollab Erasmus+ project implementation (https://digifuncollab.eu/), from September 1, 2023, till

August 31, 2025. The methodological approach is a collaborative one, and was supported by four teams of trainers, researchers and practitioners in the field of SE from University Telematica Pegaso (Italy), Politehnica University of Timisoara (Romania), International School for Social and Business Studies Celje (Slovenia) and a non-governmental organization Verein für Sozialwissenschaftliche Beratung und Forschung e.V. (Germany). Thus, the developed framework considers the specifics of SE in four countries and aligns with the EU strategic framework in this field.

B. The framework for SE self-skills development

The DigiFunCollab project has successfully delivered several key outputs aligned with its objectives and that are considered methodological steps for the framework development (Fig 1):

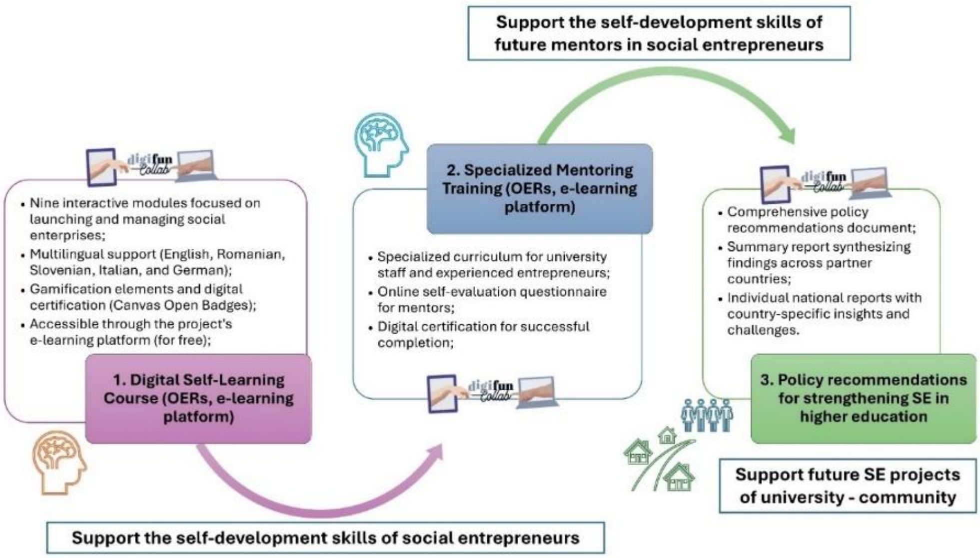

Fig. 1. DigiFunCollab framework based on the project's collaborative activities implementation within the international consortium (authors own development)

1. Digital Self-Learning course in SE - A comprehensive digital learning platform featuring (available at: https://elearningproject.eu/courses/social-entrepreneurship-in-university/):
• Nine interactive modules focused on launching and managing social enterprises;
• Multilingual support (English, Romanian, Slovenian, Italian, and German);
• Gamification elements and digital certification (Canvas Open Badges);
• Accessible through the project's e-learning platform (for free);

2. Specialized mentoring training module (available at: https://elearningproject.eu/courses/teaching-social-entrepreneurship-and-mentoring-studentprojects/) - A dedicated training module for mentors supporting SE projects;
3. A set of policy recommendations - Research-based guidance for strengthening social entrepreneurship in higher education (available at: https://digifuncollab.eu/results/#Result4).

The DigiFunCollab framework has been tested and validated (the digital self-learning course in SE and the mentoring training module) via project development and international competition (evaluation, comparison analysis). Students from partner institutions have developed social enterprise initiatives based on the created DigiFunCollab knowledge pool, the available framework for project development, with the support of an online mentorship schema. Further, a national project selection has been made, and 3 to 5 projects were considered for the international competition. The videos of winning projects are available at: https://digifuncollab.eu/results/#Result3.

C. DigiFunCollab project impact

The DigiFunCollab project has achieved significant results across multiple dimensions. In the following, the main impact indicators, facts and figures will be summarised that will demonstrate the usefulness of the designed framework (Fig. 1) and the education and certification program that has been designed and implemented.
1. Participation and engagement - The international students and HEIs teaching staff created a vibrant learning community, similar with the overall course participation are (on 30 of June 2025): 228 total participants engaged across all learning modules; 182 learners successfully completed the SE training modules; 35 mentors completed the specialized mentoring module (some of them having a certificate and online badge as recognition for their competence).

The geographical distribution of the target group demonstrates the strong need for SE education in Romania, and the quick spread and adoption of the DigiFunCollab framework in different local communities of social entrepreneurs. The number of participants registered in the e-learning platform and who have access to the training materials (Open Education Resources) is as follows: 115 participants from Romania (area of Timisoara), 74 participants from Slovenia (area of Celje), 31 participants from Italy (Napoli area) and 8 participants from Germany (Regensburg are).
2. Mentoring implementation program has been supported during several activities including a short learning activity of partners' participants with 25 mentors; 30 mentors were trained through the dedicated online module; 18 mentors earned certificates of completion. Thus, the developed mentoring open education resources

and the evaluation tools (a quiz and a gaming exercise) have been highly useful for mentors' self-training.
3. In the SE project development 111 students collaborated in 46 project groups across partner countries, from which: 72 participants developed 17 project groups from Slovenia; 26 participants have contributed to the development of 20 project groups/individual projects in Romania; 6 Italian participants have been developed 3 project groups/individual projects; 7 German participants developed 3 project groups/individual projects.
4. Award-winning social enterprise projects in the international competition (https://digifuncollab.eu/results/#Result3): First price, "SOW and SAVOR – Cook with care, eat with purpose", developed by a student of UPT (Romania); second price: "Roots of Legality – Social and Inclusive Garden" by students from UniPegaso, Italy; third price: "From Idea to Impact (Accessible Physical Activity)" developed by a group of students from ISSBS, Slovenia and the project entitled "Decentralized AI for Social Good: Private, Inclusive and Low-Cost AI for All Communities", developed by a group of students from Germany.

IV. Conclusions

The comparative study presented here explores the diverse legal frameworks and financial support systems for social entrepreneurship in Romania, Slovenia, Germany, and Italy. While all four countries are members of the European Union and thus benefit from overarching EU policies and funding mechanisms, their national approaches to fostering SE exhibit significant variations, shaped by historical context, policy priorities, and the maturity of their social economy sectors.

Furthermore, the study underlined the diverse national approaches to SE. The legal and financial frameworks for social entrepreneurship (SE) vary significantly across Romania, Slovenia, Germany, and Italy. Italy has the most mature and integrated system, while Germany lacks a national legal framework and relies on regional strategies.

In the presented study, the critical role that HEIs play in nurturing the SE locally and regionally has been discussed. HEIs are essential in developing digital self-learning frameworks for SE. Their "third mission" enables them to foster hybrid competencies, cultivate the SE mindset, and support community-based innovation.

In addition, there is a pressing need for harmonized legal recognition of SE across EU member states to facilitate cross-border collaboration and reduce administrative burdens. Comprehensive support ecosystems that combine financial aid with mentorship, training, and technical assistance are crucial for sustainable SE development.

Romania faces significant challenges in accessing funding, often relying on self-financing. Italy shows strong innovation in funding mechanisms, while Germany's decentralized approach leads to regional disparities.

The most important message of this study is that digital learning should be seen as a catalyst for SE skills development and should be supported by the capacity and potential of the HEIS. The DigiFunCollab Erasmus+ project demonstrated the effectiveness of digital self-learning platforms in SE education, with multilingual modules, gamification, and certification tools. The project and the presented framework (Fig. 1) successfully engaged over 230 participants, trained mentors, and supported the development of 46 SE projects across four countries, showcasing the potential of collaborative international education initiatives.

V. Recommendations. Future research

To further strengthen the SE entrepreneurship ecosystem in the countries involved in this study and across the EU, the following recommendations are put forth:

1. Harmonize and standardize legal recognition - The EU should continue to encourage and facilitate the development of more harmonized guidelines for social enterprise recognition across member states. This would reduce complexity for cross-border operations and foster a more integrated European social economy market. Countries like Germany could benefit significantly from adopting a national legal framework or a status-based recognition system like Slovenia's.

2. Enhance access to diverse funding - Policymakers in all countries, particularly Romania, should focus on improving the accessibility of funding for social enterprises. This includes simplifying application processes, increasing awareness of available funds, and developing more tailored financial instruments, such as patient capital and social impact bonds that align with the unique needs and long-term impact goals of social enterprises.

3. Integrate financial and non-financial support - There is a critical need to better integrate financial support with non-financial services like mentorship, capacity building, and technical assistance. Comprehensive support ecosystems ensure that social enterprises not only receive capital but also possess the necessary skills and knowledge to achieve sustainable growth and maximize their social impact.

4. Promote impact measurement and reporting - Implementing standardized requirements for impact measurement and reporting within legal frameworks would enhance accountability, attract more impact investors, and provide valuable data for evidence-based policymaking. This would allow for a clearer demonstration of the social and economic value generated by social enterprises.

5. Foster cross-country learning and collaboration (generalize successful programs at the national level): Facilitating structured knowledge exchange and collaborative initiatives between member states can accelerate the development of

best practices. Countries with less mature ecosystems can learn from the experiences of those with more established frameworks and funding mechanisms, while more developed nations can gain insights into innovative approaches from emerging contexts.

By addressing these areas, Romania, Slovenia, Germany, and Italy, along with the broader EU, can cultivate an even more vibrant and effective SE sector, capable of driving significant positive change and contributing to a more inclusive and sustainable future.

Potential future research directions will include the investigation of the long-term impact of digital self-learning platforms on the success and sustainability of social enterprises initiated by students and community members. This will create the basis for analysing different models of university-community collaboration to identify best practices for co-creating social innovation projects. In addition, future research will be conducted to enhance entrepreneurial activities at the HEI community level, as well as to support their sustainable and smart development [24-27]. New digital technologies must play a decisive role in supporting SE activities, through an excellent relationship between HEIs and communities.

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References

[1] C. Sampaio and J.R. Sebastião, "Social innovation and social entrepreneurship: uncovering themes, trends, and discourse", *Administrative Sciences*, vol. 14, no. 3, p. 53, 2024.

[2] L. Alkire, C. Mooney, F.A. Gur, S. Kabadayi, M. Renko and J. Vink, "Transformative service research, service design, and social entrepreneurship: An interdisciplinary framework advancing wellbeing and social impact", *J. of Service Management*, vol. 31, no. 1, pp. 24-50, 2020.

[3] M.T. Miah, Z. Lakner and M. Fekete-Farkas, "Addressing poverty through social entrepreneurship for sustainable development: a comprehensive bibliometric analysis", *Administrative Sciences*, vol. 14, no. 1, p. 16, 2024.

[4] X. Jia and G. Desa, "Social entrepreneurship and impact investment in rural–urban transformation: An orientation to systemic social innovation and symposium findings", *Social innovation and sustainability transition*, Cham: Springer Nature Switzerland, pp. 283-305, 2022.

[5] T. H. Morris and P.D. König, "Self-directed experiential learning to meet ever-changing entrepreneurship demands", *Education+ Training*, vol. 63, no. 1, pp. 23-49, 2020.

[6] C. Y. Ip, "Effect of digital literacy on social entrepreneurial intentions and nascent behaviors among students and practitioners in mass communication", *Humanities and Social Sciences Communications*, vol. 11, no. 1, pp. 15-22, 2024.

[7] A.P. Malshe and S.T. Bapat, "Learning Social Innovations and Social Entrepreneurship During COVID-19 Pandemic: Lessons Learned", *In 2021 ASEE Virtual Annual Conference Content Access*, pp. 80-89 2021, July.

[8] A. González-García, L. M. Romero-Rodríguez, J. M., Romero-Rodríguez and M. S. Ramírez-Montoya, "Validation of instruments to measure social entrepreneurship competence. The OpenSocialLab project", *In 2020 IEEE Global Engineering Education Conference (EDUCON)*, pp. 1338-1342, IEEE, 2020.

[9] A. Draghici, M. Mocan and G. Draghici, "On-line training and certification solution for business process managers", *Proceedings of the International Conference on Enterprise Information Systems*, Berlin, Heidelberg: Springer Berlin Heidelberg, pp. 380-389, 2011.

[10] European Commission. (n.d.). *Romania - European Commission Social Economy Gateway*. https://social-economy-gateway.ec.europa.eu/mycountry/romania_en (Accessed 12-07-2025)

[11] European Commission. (n.d.). *Slovenia - European Commission Social Economy Gateway*, https://social-economy-gateway.ec.europa.eu/mycountry/slovenia_en (Accessed 12-07-2025)

[12] European Commission. (n.d.). *Germany - European Commission Social Economy Gateway*, https://social-economy-gateway.ec.europa.eu/mycountry/germany_en (Accessed 12-07-2025)

[13] European Commission. (n.d.). *Italy - European Commission Social Economy Gateway*. https://social-economy-gateway.ec.europa.eu/my-country/italy_en (Accessed 12-07-2025)

[14] C. Barna and A.D. Rebeleanu, "Challenges of Measuring Social Impact in Romania. A Case Study in a Social Economy Organization Active in the Social Services Field", "Revista de Cercetare si Interventie Sociala", vol. 84, 2024.

[15] B.B. Hojnik, "Overview of social entrepreneurship development in Slovenia", *Transylvanian Review of Administrative Sciences*, vol. 16, no. 60, pp. 5-21, 2020.

[16] K. Cagarman, J. Kratzer, L.H. von Arnim, K. Fajga and M.J. Gieseke, "Social entrepreneurship on its way to significance: The case of Germany", *Sustainability*, vol. 12, no. 21, 8954, 2020.

[17] N. Cucari, E. D'Angelo, E. Esposito and M.V. Ciasullo, "Assessing the social entrepreneurship business model: an exploratory case study in the Italian cultural heritage sector", *Entrepreneurship Research Journal*, vol. 10, no. 4, 2020.

[18] European Commission. (n.d.). *European Social Fund+ - Social Economy Gateway*, https://social-economy-gateway.ec.europa.eu/eu-fundingprogrammes/european-social-fund_en (Accessed 12-07-2025)

[19] European Commission. (n.d.). *Invest EU - European Commission Social Economy Gateway*, https://social-economy-gateway.ec.europa.eu/eu-fundingprogrammes/invest-eu_en (Accessed 12-07-2025)

[20] European Commission. (n.d.). *Structural and investment funds - European* Commission. https://commission.europa.eu/eu-regional-and-urbandevelopment/financial-support-projects/structural-and-investment-funds_en (Accessed 12-07-2025)

[21] A. Iancu, L. Popescu and V. Popescu, "Factors influencing social entrepreneurship intentions in Romania", *Economic research-Ekonomska istraživanja*, vol. 34, no. 1, pp. 1190-1201, 2021.

[22] A. Zbuchea, C. Barna, S. Stănescu and F. Pînzaru, "Exploring the Motivations Behind Circular Social Entrepreneurs in Romania", *Entrepreneurial Motivations: Strategies, Opportunities and Decisions*, Cham: Springer Nature Switzerland, pp. 191-203, 2024.

[23] A. Marin-Pantelescu and M. Hint, "Social Efficiency in Romanian Education Services". *Proceedings of the International Conference on Business Excellence*, Vol. 19, No. 1, pp. 3881-3889, Sciendo, 2025.

[24] M.C. Grigoroiu, C. Țurcanu, C.P Constantin, A.S. Tecău, B. Tescașiu, "The Impact of EU-Funded Educational Programs on the Socio-Economic Development of Romanian Students: A Multidimensional Analysis", *Sustainability*, 17(5), 2057, 2025.

[25] C.T. Albulescu and A. Draghici, "Entrepreneurial activity and national innovative capacity in selected European countries", *The International Journal of Entrepreneurship and Innovation*, vol. 1, no. 3, pp. 155-172, 2016.

[26] A. Draghici and C.T. Albulescu, "Does the entrepreneurial activity enhance the national innovative capacity?" *Procedia-Social and Behavioral Sciences*, vol. 124, pp. 388-396, 2014.

[27] R.M. Sirbu, A.D. Popescu, C. Borca and A. Draghici, A study on Romania sustainable development, *Procedia Technology*, vol. 19, pp. 416-423, 2015.