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DEVELOPING SUSTAINABLE ENTREPRENEURS THROUGH SOCIAL ENTREPRENEURSHIP EDUCATION

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Abstract:

This paper explores the potential of social entrepreneurship education (SEE) as a means to foster sustainable businesses. SEE is defined as a pedagogical approach that aims to develop the knowledge, skills and attitudes of students to address social and environmental challenges through entrepreneurial solutions. The paper reviews the literature on SEE and its impact on students' entrepreneurial intentions, behaviors and outcomes. It also presents a conceptual framework that links SEE to the dimensions of sustainability: economic, social and environmental. The paper argues that SEE can enhance students' awareness of sustainability issues, stimulate their motivation to create positive change, and equip them with the tools and methods to design and implement sustainable business models. The paper concludes with some implications for policy and practice, as well as suggestions for future research.

1. Introduction

Social entrepreneurship education (SEE) is a form of entrepreneurship education that aims to foster sustainable businesses that address social and environmental problems. SEE can help students develop the skills, knowledge and mindset to create innovative solutions that benefit society and the planet (Kickul & Lyons, 2020). SEE can also serve as an innovation hub for building an entrepreneurial ecosystem that supports social entrepreneurs and their ventures.

One of the main challenges of SEE is to connect and align various stakeholders that are involved in the social enterprise ecosystem, such as universities, firms, government agencies, civil society organizations and natural environments (Carayannis et al., 2019; M. G. Kim et al., 2020). By enhancing the internal and external connectivity of SEE programs, students can learn from diverse perspectives, access resources and opportunities, and

collaborate with potential partners. This can lead to more effective and sustainable social innovation.

One of the key skills that a social entrepreneur needs to develop is the ability to build strategic partnerships with various stakeholders (Anh et al., 2022; Sullivan Mort et al., 2003). Therefore, when designing and delivering education programs for current and aspiring social entrepreneurs, it is important to consider how all the components of the curriculum, the extracurricular activities, and the physical and digital infrastructure can foster a collaborative social network (Amundam, 2019; Grecu et al., 2013; Grecu & Denes, 2017). However, most of the existing research on social entrepreneurship education (SEE) has focused on the micro-level outcomes of SEE, such as whether the participants have started or intend to start a social venture (K. Kim et al., 2023; Smith et al., 2008). There is a need for a more holistic and systemic perspective on SEE that examines how it can enhance the problem-solving capacities of social entrepreneurs and enterprises, and how it can contribute to the sustainability of the social enterprise ecosystem.

Several studies have explored the potential of SEE as a means to foster sustainable businesses and social change. For example, Kim et al. (2020) proposed a design and assessment framework for SEE based on the quintuple helix model, which emphasizes the interactions among five entities: academia, industry, government, civil society and natural environment. They analyzed the case of the KAIST Social Entrepreneurship MBA program in Korea and suggested ways to improve its connectivity with the social enterprise ecosystem. Another example is a study by Sparkes et al. (2021), which examined how collaborations with social entrepreneurs are helping to achieve the Sustainable Development Goals (SDGs). They highlighted the role of Catalyst 2030, a global movement of social entrepreneurs and innovators that launched at the World Economic Forum Annual Meeting in Davos 2020. They showed how social entrepreneurs work together to tackle some of the world's greatest threats and shift the entire landscape of the social change sector. A third example is a study by Gedeon (2021), which presented a process-based progression framework of SEE that focuses on creating a social entrepreneurship mindset for learners. The framework consists of four stages: awareness, opportunity recognition, venture creation and venture growth. The framework can assist in the design of relevant and targeted SEE courses that cater to different levels of learners.

These studies indicate that SEE is a promising field of education that can contribute to sustainable development and innovation. However, more research is needed to understand the best practices, challenges and outcomes of SEE in different contexts and settings. Moreover, more collaboration among SEE providers, researchers, practitioners and policymakers is needed to create a supportive environment for social entrepreneurship education and practice.

This paper aims to present the impact of a problem based learning activity, where students from 3 different faculties of Lucian Blaga University of Sibiu participated in a program titled Sibiu Impact Makers.

2. Literature review

Social entrepreneurship education (SEE) is a form of entrepreneurship education that aims to foster social entrepreneurs who can create sustainable solutions for social and

environmental problems (Halberstadt et al., 2019; M. G. Kim et al., 2020). SEE can also serve as an innovation hub for building an entrepreneurial ecosystem (EE) that supports social innovation and collaboration among various stakeholders (Audretsch et al., 2022).

One of the main challenges of social entrepreneurs is to connect and align with different actors in the EE, such as universities, firms, government agencies, civil societies, and natural environments (M. G. Kim et al., 2020). These actors can provide valuable resources, knowledge, and networks for social entrepreneurs to achieve their social missions and create positive impacts (Doherty et al., 2014; Pache & Chowdhury, 2012). Therefore, SEE should be designed and operated to cultivate social entrepreneurs' abilities to enhance connectivity with all relevant entities of the EE. This can lead to the formation of ever-growing communities of social entrepreneurs who can learn from each other and co-create innovative solutions for society .

A conceptual framework for designing and assessing SEE programs based on this connectivity perspective was proposed by Kim et al. (2020). The framework emphasizes strengthening internal connectivity among SEE program members and external connectivity with outside entities, including the five actors of the EE mentioned above. The framework also integrates social theories of learning and the quintuple helix model for sustainable innovation ecosystems to clarify how and to whom social entrepreneurs should connect throughout the SEE process. The framework can be used as a useful benchmark to find isolated internal and external entities that need more active interactions to achieve SEE's purposes.

The main theoretical frameworks that have guided the research on educational methods are social learning theories and practice-based wisdom theory. Social learning theories emphasize the role of observation, imitation, and modeling in the learning process, and how these are influenced by factors such as attention, motivation, attitudes, and emotions. According to these theories, learning from peers is more effective than formal instruction-based learning. Howorth et al. (2012) showed that learner identity and psychological safety are key factors for developing social entrepreneurship skills and suggested that programs should foster reflection and thinking to help social entrepreneurs adapt to their own contexts. Hockerts (Hockerts, 2018) demonstrated that social entrepreneurship education (SEE) enhances students' propensity to start social enterprises through experiential learning activities that create a shared community of practice. He also found that more practical SEE increases students' perceptions of social support, self-efficacy in entrepreneurship, and intentions to start social enterprises. He confirmed that experiential learning activities have greater learning outcomes than other types of activities. Zhu et al. (Zhu et al., 2016) addressed the challenge of balancing competing logics in social enterprises and proposed a curriculum matrix for designing a sustainable business model based on practice-based wisdom theory. This theory focuses on the tacit knowledge and practical wisdom that practitioners acquire through experience and reflection.

Previous studies that evaluated the educational performance of SEE mainly measured the impact on students' perceptions, attitudes, and intentions. Kirby and Ibrahim (2011) explored the awareness and attitudes of Egyptian students towards social entrepreneurship as a career option and argued that they need to be improved. Dobele (2016) claimed that integrating SEE into university curricula has benefits at the individual,

organizational, and environmental levels. He noted that SEE is not only essential for creating sustainable social structures, but also for enhancing the personal growth of individuals.

In conclusion, SEE can play a vital role in fostering sustainable businesses by developing social entrepreneurs who can connect and collaborate with various stakeholders in the EE. SEE can also function as an innovation hub for building an EE that supports social innovation and sustainability. To achieve these goals, SEE should be designed and assessed based on a connectivity perspective that considers both internal and external entities of the EE.

3. Context of the research

The paper investigates the impact of an interdisciplinary program derulated at Lucian Blaga University of Sibiu (Baltador et al., 2021). The program was designed to foster social innovation and entrepreneurship among students from different disciplines and backgrounds. It used the design thinking methodology, which is a human-centered approach to solving problems that involves five stages: empathize, define, ideate, prototype and test. The program had three main components:

•The kick-off meeting: This was an introductory session where the participants learned about the concept of social entrepreneurship and the principles of design thinking. They also met their teammates and their account managers, who were lecturers that supported and motivated them throughout the program. The participants also received training on how to use Miro, a digital workspace for remote collaboration.

•The course: This was a seven-week course that covered each phase of the design thinking process in detail. The participants attended one-hour lectures every week and worked on their projects for eight hours per week in their teams. They also received guidance and feedback from their coaches, who were experts in design thinking and social innovation.

•The final presentation: This was an opportunity for the teams to showcase their projects and demonstrate how they applied the design thinking methodology to address a real-world problem in their community. The projects were evaluated by a panel of judges from academia, industry and civil society.

The program involved 184 students from three faculties within Lucian Blaga University of Sibiu: School of Economic Sciences, School of Social Sciences & Humanities and Engineering. The students had different majors, such as Business Administration, Marketing, Communication & Public Relations, Human Resources and Economic Engineering in Mechanical Field. The teams were randomly assigned and mixed, aiming to expose the students to diverse perspectives and skills. The program aimed to prepare the students for the challenges and opportunities of a dynamic, internationalized and ever-changing working environment.

4. Methodology

The research methodology for this paper is a mixed-methods approach that combines quantitative and qualitative data collection and analysis. The main data source is a questionnaire that was administered to the 184 students from Lucian Blaga University of

Sibiu who participated in Sibiu Impact Makers program. The questionnaire consisted of 71 questions that aimed to measure the following dimensions of the respondents: self-efficacy, social entrepreneurship and social justice. The questionnaire was applied before and after the program to assess the impact of social entrepreneurship education on these dimensions. Out of the 184 participants in the project, 153 completed the online questionnaire before the program, and 101 respondents participated in the survey after the program. Afer curating the data, the researchers identified that 93 students answered both before and after the program. The rest of the responses were discarded.

The quantitative data from the questionnaire was analyzed using descriptive statistics and inferential statistics. Descriptive statistics were used to summarize the characteristics of the sample and the distribution of the scores on each dimension. Inferential statistics were used to test the hypotheses that there are significant differences between the pre-test and post-test scores on each dimension, and that there are significant correlations between the dimensions.

The 71 questions aimed to assess intrapersonal, social and cognitive skills of the participants, both from their cooperative and their social-entrepreneurship potential. These dimmensions were interpreted by groups of questions, as shown in table 1.

Table 1. Skills assessed

	Cooperative	Social entrepreneur
Intrapersonal	Questions 1 to 3	Questions 4 to 32
Social	Questions 33 to 41	Questions 42 to 53
Cognitive	Questions 54 to 62	Questions 63 to 71

The qualitative data was collected after interviewing participants who volunteered to offer feedback after completing the program. The qualitative data the questionnaire was analyzed using thematic analysis, a method of identifying, organizing and interpreting patterns and meanings in qualitative data. The qualitative data consisted of open-ended questions that asked the respondents to explain their answers or provide examples. The thematic analysis followed six steps: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing up the results. The themes were derived from both inductive and deductive coding, meaning that some themes emerged from the data itself, while others were based on existing theories or frameworks.

The mixed-methods approach was chosen because it allows for a more comprehensive and nuanced understanding of the research problem than either quantitative or qualitative methods alone. By combining numerical and textual data, the research can capture both the extent and the nature of the impact of social entrepreneurship education on the students' attitudes and behaviors. The mixed-methods approach also helps to validate and triangulate the findings from different sources and methods.

5. Results

Sustainable entrepreneurship differs from conventional entrepreneurship, which prioritizes economic profit maximization, by acknowledging the potential of entrepreneurs to

create value in economic, social and ecological dimensions through their business activity (Belz & Binder, 2017; Muñoz & Cohen, 2018; Schaltegger & Wagner, 2011). The term reflects the dynamic relationship between entrepreneurs as economic actors, the society and natural environment.

A prominent definition by Shepherd and Patzelt (2011, p. 35) states: "Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society". Rather than aiming to reduce social and environmental harm, sustainable entrepreneurship ideally strives to regenerate the environment and foster positive social change, beyond mere economic wealth generation (Markman et al., 2016; Muñoz & Dimov, 2015; Patzelt & Shepherd, 2011). Thus, sustainable entrepreneurship proposes entrepreneurial activity as a potential solution to environmental degradation and social inequality (Cohen & Winn, 2007; Muñoz & Cohen, 2018; Shepherd & Patzelt, 2011).

The participants responded to 71 questions on a Likert Scale with five options ranging from 1 (Totally disagree) to 5 (Totally agree). The questions measured the participants' self-perceptions of their skills and attitudes before and after the program. A weighted score was computed for each question using the following formula: the percentage of responses for each option was multiplied by its weight (1 to 5). For example, the weighted scores for the responses to question 1, shown in table 2, are displayed in table 3.

Table 2. Answers to question 1 before and after the program

Question	Before					After				
	Totally disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Totally agree (5)	Totally disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Totally agree (5)
1. I feel that I am good at identifying new business opportunities for social change	0.99%	3.96%	3.96%	65.35%	25.74%	0.00%	3.70%	3.70%	62.96%	29.63%

By analysing the weighted scores, one can observe that the closer the score is to the maximum value, 5, the more the respondents agree with the statements of the questionnaire. Descriptive statistics were generated using MiniTab and the items that showed significant changes (for a 95% confidence degree, thus a P-value <0.05) after the completion of the program are presented below.

Table 3. Calculated score for question 1 before and after the program

Question	Before	After
1. I feel that I am good at identifying new business opportunities for social change	4.108911	4.185185

The purpose of this study was to examine the effects of Sibiu Impact Makers, a program focused on social-cooperative entrepreneurship, on the participants' attitudes, skills and behaviors. The program consisted of sessions that covered topics such as social innovation, business planning, teamwork, communication, and ethics.

Table 4. Research items that showed a significant improvement after the completion of the program

Question	Before	After	Difference
69. I have difficulty maintaining my focus on projects that take more than a few months to complete	3.129412	3.740741	0.611329
30. It is everybody's responsibility to help disadvantaged people	3.333333	3.851852	0.518519
5. I am confident in my present readiness for successfully commercialising an idea or development through a social cooperative enterprise	3.722222	4.222222	0.5
8. I have a knack for further developing the ideas of others.	4.09322	4.592593	0.499372
61. I often re-evaluate my experiences so that I can learn from them	3.95	4.407407	0.457407
6. I feel that I am good at generating novel ideas.	3.896226	4.333333	0.437107
9. Because of the skills that I have, I am confident that I am able to manage unexpected events effectively	3.859813	4.296296	0.436483
67. I have been obsessed with a certain idea or project for a short time but later lost interest	2.970874	3.37037	0.399497
45. The university has many resources to help students to start a social enterprise	3.425532	3.777778	0.352246
31. Everybody has an obligation to help solve the problems that society faces	3.951923	4.296296	0.344373
70. I finish whatever I begin	2.583333	2.925926	0.342593
59. It's important to understand other people's viewpoint on an issue	3.294737	3.62963	0.334893
29. For me, it is important that people in poor situations should have all opportunities to fully develop themselves.	3.526316	3.851852	0.325536
32. Everybody needs to protect the environment for future generations	3.616162	3.925926	0.309764
71. I am diligent	2.777778	3.074074	0.296296
7. I have confidence in my ability to solve problems creatively.	3.823529	4.074074	0.250545

The results showed that the participants improved significantly on several items after completing the program. In particular, they reported, more responsibility to help disadvantaged people (item 30), more confidence in their readiness for commercializing a social cooperative enterprise (item 5), more skill in developing the ideas of others (item 8), more tendency to re-evaluate their experiences and learn from them (item 61), more confidence in their ability to generate novel ideas (item 6), more confidence in their ability to manage unexpected events effectively (item 9), less obsession and loss of interest in certain ideas or projects (item 67), more awareness of the university resources to help them

start a social enterprise (item 45), more obligation to help solve the problems that society faces (item 31), more completion of what they begin (item 70), more importance of understanding other people's viewpoint on an issue (item 59), more importance of providing opportunities for people in poor situations to fully develop themselves (item 29), more need to protect the environment for future generations (item 32), and more diligence (item 71) (see table 4).

Table 5 – Research items that worsened after the completion of the program

Question	Before	After	Difference
34. People will help me if I plan to address a problem in society	3.851852	3.740741	-0.11111
42. The university provides students with the knowledge needed to start a social enterprise	3.640625	3.518519	-0.12211
35. It is possible to attract funders for a new social enterprise	3.752475	3.62963	-0.12285
40. The university creates awareness of social entrepreneurship as a possible career choice	3.87037	3.740741	-0.12963
44. The university arranges workshops and conferences on social entrepreneurship	3.548387	3.407407	-0.14098
26. I am not afraid to start new social initiatives.	2.862319	2.703704	-0.15862
28. I would like everyone to be treated with justice, including people I don't know.	4.423423	4.259259	-0.16416
25. I am always willing to start new projects that will bring social benefits.	4.525862	4.333333	-0.19253
18. When I am arguing with someone, I try to put myself in the other person's place before I speak.	4.242424	4.037037	-0.20539
39. The university provides a creative atmosphere to develop ideas for a social enterprise	4.041667	3.814815	-0.22685
55. I often use new ideas to shape (modify) the way I do things	3.710843	3.481481	-0.22936
38. I am familiar with the problems that society faces	4.131313	3.888889	-0.24242
17. It is easy for me to tell other people what I think of them.	4.037736	3.740741	-0.297

Although most of the items showed slight or significant improvements after the completion of the program, showing that the program had a positive effect on the students, who improved their social entrepreneurial potential after the training. However, there were some items that showed a worsening or no change after the program, which deserve further attention and analysis. Thus, after facing real problems and the challenge to work with colleagues from different faculties, most of the students reported more difficulty in maintaining their focus on long-term projects (item 69). Other items that showed worsened scores are related to the perceived support, knowledge, awareness, and creativity provided by the university for social entrepreneurship, as well as the personal attitudes, motivations, and skills of the participants towards social entrepreneurship. A possible explanation for this finding is that the training program increased the participants' awareness of the challenges and difficulties involved in starting and running a social enterprise, as well as their expectations and standards for themselves and the university. Therefore, they may have felt less confident, satisfied, and supported after completing the program than before. This suggests that the training program should be complemented with more practical and experiential activities that can enhance the participants' self-efficacy, resilience, and networking skills for social entrepreneurship. Moreover, the university should also provide

more opportunities and resources for students who are interested in pursuing a career in social entrepreneurship, such as workshops, conferences, mentoring, incubation, and funding (see table 5).

6. Limitations

This paper has several limitations that should be acknowledged and addressed in future research. First, the results obtained from the questionnaire may not accurately reflect the true levels of self-efficacy, social entrepreneurship and social justice of the respondents. Second, the sample size of this study is relatively small and not representative of the entire population of students who participated in Sibiu Impact Makers program. Moreover, the attrition rate of the respondents was high, as only 93 out of 184 students completed both pre-test and post-test surveys. This may introduce bias and reduce the generalizability of the findings. Third, the data analysis methods used in this study are limited to descriptive and inferential statistics, which do not capture the complexity and diversity of the social entrepreneurship education experience. A more comprehensive and nuanced analysis could be achieved by using qualitative methods, such as interviews, focus groups or observations, to complement the quantitative data and provide richer insights into the processes and outcomes of the program. Fourth, the data interpretation and conclusions drawn from this study are based on the assumptions and perspectives of the researchers, who may have their own biases and preconceptions about social entrepreneurship education. Therefore, alternative interpretations and explanations may exist that are not considered or explored in this paper.

7. Conclusion

This study aimed to examine the impact of a problem-based social entrepreneurship education program, Sibiu Impact Makers, on the development of social entrepreneurial skills and sustainable entrepreneurship abilities among university students. The findings suggest that the program succeeded in fostering a positive and supportive learning environment for the participants, and it encouraged them to pursue social entrepreneurship as a viable and rewarding option. The program also exposed some of the challenges and barriers that social entrepreneurs face, such as lack of funding, knowledge, and recognition, without providing adequate guidance and resources to overcome them. This may have made the students aware of the struggles of social and sustainable entrepreneurs, but also discouraged some of them from pursuing their ideas further. Furthermore, the results suggest that the program may have boosted the participants' sense of self-efficacy, empathy, and justice orientation, which are essential for developing a social entrepreneurial mindset and behavior.

The findings of this study contribute to the literature on social entrepreneurship education by providing empirical evidence of its effects on students' attitudes, intentions, and actions. The study also offers practical implications for educators and practitioners who aim to design and implement effective social entrepreneurship education programs. Based on the results, some recommendations can be made to improve the quality and outcomes of such programs. First, it is important to provide students with more opportunities to interact

with real-life social entrepreneurs and learn from their experiences and challenges. This can help students gain a realistic understanding of what it takes to be a successful social entrepreneur and how to overcome potential obstacles. Second, it is essential to equip students with the necessary skills and resources to develop and implement their own social entrepreneurial projects. This can include providing mentoring, coaching, funding, networking, and recognition support. Third, it is vital to foster a culture of social entrepreneurship within the educational institution and beyond. This can involve creating awareness, promoting collaboration, celebrating achievements, and rewarding innovation.

In conclusion, this study demonstrated that social entrepreneurship education can have a positive impact on students' development of social entrepreneurial skills and sustainable entrepreneurship abilities. However, it also revealed some limitations and challenges that need to be addressed in order to enhance the effectiveness and sustainability of such programs. Future research should continue to explore the long-term effects of social entrepreneurship education on students' career choices and social impact.

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