

STRENGTHENING SUSTAINABILITY IN ENTREPRENEURSHIP EDUCATION - IMPLICATIONS FOR SHIFTING ENTREPRENEURIAL THINKING TOWARDS SUSTAINABILITY AT UNIVERSITIES

Ieva BRUKSLE (0009-0003-7467-4550)¹, Constanze CHWALLEK (0009-0006-1546-1493)²

Anzelika KRASTINA(0009-0004-4927-1159)³

¹ *Turība University, Riga, Latvia*

² *FH Aachen University of Applied Sciences, Aachen, Germany*

³ *Lapland University of Applied science, Rovaniemi, Finland*

ieva.bruksle@turiba.lv, chawallek@fh.de, anzelika.krastina@lapinamk.fi

Abstract.. By developing innovative solutions to social and environmental problems, sustainable ventures carry great potential. Entrepreneurship which focuses especially on new venture creation can be developed through education and universities, in particular, are called upon to provide an impetus for social change. But social innovations are associated with certain hurdles, which are related to the multi-dimensionality, i.e. the tension between creating social, environmental and economic value and dealing with a multiplicity of stakeholders. The already complex field of entrepreneurship education has to face these challenges. This paper, therefore, aims to identify starting points for the integration of sustainability into entrepreneurship education. To pursue this goal experiences from three different project initiatives between the partner universities: Lapland University of Applied Sciences, FH Aachen University of Applied Sciences and Turība University are reflected and findings are systematically condensed into recommendations for education on sustainable entrepreneurship.

Keywords: climate change, entrepreneurship education, Finland, Germany, Latvia, SECA project, social entrepreneurship, sustainability, sustainable entrepreneurship, sustainable development goals

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Introduction

Practitioners and academics agree that sustainable entrepreneurship plays a central role in accelerating the development of sustainable economies (Cervelló-Royo et al., 2020). Entrepreneurship is considered a key element for economic development that can be promoted and developed through education (Kuratko, 2005; O'Connor, 2013). The Consortium for Entrepreneurship Education (2008) notes that entrepreneurship is not just about teaching someone how to run a business, but also about fostering critical thinking and self-esteem. (Martínez-Gregorio et al., 2021)

Sustainable ventures (SVs) are characterized by a dual mission to generate (measurable) social, environmental value while generating economic returns (Saebi et al., 2019). Sustainable entrepreneurs innovate new solutions to social and environmental problems that are more efficient than the public sector and activate a virtuous circle of social capital within local communities that, if scaled up, can bring us a step closer to the 17 sustainable development goals (SDGs) (Rahdari et al., 2016). The SDGs were introduced by the United Nations in 2015 to mobilize global efforts toward sustainable development by 2030.

Innovations that aim to address social challenges face specific obstacles that limit investment and hinder their development and diffusion. These challenges are related to the multidimensional nature of social challenges and the involvement of multiple stakeholders. The OECD has identified challenges such as the inadequacy of current indicators like GDP to reflect new values such as sustainability, limited prospects for large gains in the social sector, traditional boundaries between disciplines and sectors hindering the development and diffusion of social innovation, the need for the integration of multiple disciplines, and the necessity for greater involvement of stakeholders in the innovation process.

Given these challenges, there is a need to integrate sustainability into entrepreneurship education and to consider the relevant aspects of sustainable entrepreneurship education. But the central question

arises as to how sustainability can be integrated into entrepreneurship education. What aspects should be considered in sustainable entrepreneurship education?

To answer this question, the experiences from three different project initiatives between the partner universities – Lapland University of Applied Sciences (Lapland UAS) -Finland, FH Aachen University of Applied Sciences (FH Aachen) -Germany and Turība University (Turība) - Latvia are reflected. Firstly, the Sustainable Entrepreneurship for Climate Action (SECA) project is examined, which seeks to create a digital handbook for entrepreneurs and decision-makers to shift their entrepreneurial mindset towards environmental consciousness. By analyzing numerous sustainable entrepreneurship best practice examples from Germany, Finland and Latvia, insights are gained into which approaches, concepts, and methods have demonstrated success in practical applications. Second, the “Sustainable Entrepreneurship Summerschool” in Aachen, Germany and third, the “International Intensive Study Programme” in Rovaniemi, Finland, have given the opportunity to test different teaching formats. Subsequently, a compilation of the most significant findings from the Sustainable Entrepreneurship Summer School and International Intensive Study Programme is presented, emphasizing the participants’ viewpoints. These findings are then methodically considered into recommendations for teaching sustainable entrepreneurship.

1. Implications for Sustainable Entrepreneurship Education

Entrepreneurship Education is defined as a qualification measure with the goal "[. . .] to make a person a more competent and a more professionalized business owner" (Katz 2007). According to the broadness of the definition, entrepreneurship education can be categorized as 'new business creation', 'opportunity recognition and exploitation' and entrepreneurial thinking and action'. (Bijedic, 2019) While the first category is seen as too formalistic and narrow, great importance is attached to the second and third category. (Bijedic, 2019, Grichnik et. Al. 2017) Accordingly, the following section looks at how sustainability can be integrated into the opportunity recognition and exploitation, where the object is in the focus and entrepreneurial thinking and action which refers to the subject (Ebbert 2019). However, as explained above, conceptual confusion makes it difficult to deal with the topic of sustainability. Therefore, it is useful to first turn to the clarification of the crucial terms.

1.1. Clarifying the underlying concepts and frameworks

The learning events on sustainable entrepreneurship within international intensive study programme in Finland and summer school in Germany highlighted a common issue across Europe where there is inconsistency in how sustainable and social entrepreneurship are understood, leading to confusion around framework concepts such as SDGs, ESG, and CSR. To alleviate this confusion, clear definitions and explanations of these terms should be provided to the learners to avoid misunderstandings. The upcoming chapters aim to provide clarification on the fundamental concepts crucial for sustainable entrepreneurship training. By doing so, they can aid educators in imparting a deeper understanding of the essential principles and practices underlying sustainable entrepreneurship.

1.1.1 Sharpening Social Entrepreneurship and Sustainable Entrepreneurship concepts

Social entrepreneurship and sustainable entrepreneurship are two related but distinct concepts that have been the subject of academic research and practical applications. In the following, the differences between these two terms in academic and practical terms will be elaborated.

Based on the literature review it seems to be evident that no consistent understanding of the terms has yet been established in the literature. One difference is seen in that social entrepreneurship is focused on creating social or environmental impact, whereas sustainable entrepreneurship is focused on creating economic, social, and environmental value in a balanced manner. Both concepts have the potential to create positive change, but they may require different approaches and strategies and have also consequences to innovation, governance, stakeholder engagement and impact measurement. (Mair & Martí 2006)

Social Entrepreneurship seeks alternative methods of leveraging opportunities that create positive social benefits (for example social "intrapreneurship," community-based businesses, nonprofit organizations). It also aims to find charitable motivations in entrepreneurship by placing a social agenda before the financial goals. Social Entrepreneurship has its disciplinary roots in the nonprofit and public sector. Sustainable Entrepreneurship has its roots in sustainable development, innovative systems and transition management. (Lumpkin, Katz 2011a)

According to Oestreicher, the relationship and differences between social and sustainable entrepreneurship can be defined as follows: social entrepreneurs are driven by a mission and often focus on social goals in addition to economic goals, whereas sustainable entrepreneurs are more profit-oriented and guided by the triple bottom line of economic, social, and environmental goals. Social entrepreneurs tend to focus on present problems, while sustainable entrepreneurship also takes future generations into account. The terms "social" and "societal" are closely related, but social entrepreneurship does not solely refer to NGOs (Oestreicher 2017).

The scholars also debate whether sustainable entrepreneurship is a type of social entrepreneurship because the benefits of sustainable action are also social or whether sustainable entrepreneurship is to be seen as the superior term because the implications are social as well as economic and environmental. (Lumpkin, Katz 2011b). Not only in the literature, but also in practice, as discussed above, it can be seen that the terms are not used consistently within Europe. For example, as explained above, the term social entrepreneurship is generally used as the overarching term in Germany. This can lead to misunderstandings, especially in international cooperation. Therefore, a conceptual clarification must be made at the beginning of each training session so that all participants of potential training can have the same idea especially when international participants come together.

1.1.2 Refining SDGs, ESG and CSR as Sustainability Framework

The concepts of SDG, ESG and CSR are widely used in the context of sustainability discussion. Even though the concepts are very much related, an attempt is made here to draw a distinction in the sense of sharpening the terms to avoid any confusion (Bak 2022).

The SDGs are the 17 Sustainable Development Goals established in 2015 at Paris Climate Conference to advance global human rights, combat poverty, and increase social responsibility for climate and environmental protection, production, and consumption. They are the most ambitious plan of the world community, agreed upon by 193 countries (Gigliotti 2019). The SDGs are an initiative primarily directed at regulators and governmental institutions. Companies can support peace, the rule of law, and improving institutions, but they are not responsible for doing so. Nevertheless, companies can also make use of this framework and map their activities accordingly. The SDGs show possible starting points for activities to push sustainability, while measurability is not yet in the focus. (Bak 2022)

CSR is a well-established framework that emerged from the increasing demand for businesses to take responsibility for their impact on society and the environment. However, the initiatives undertaken are often limited in scope and difficult to evaluate in terms of their contribution to sustainable development. While companies may assess the effectiveness of their CSR initiatives voluntarily, there is often a greater emphasis on implementation rather than monitoring and evaluating the outcomes (Książka 2016).

ESG delivers a comprehensive framework for addressing sustainability issues. It focuses on how a given initiative can be assessed and quantified (Pérez et. al. 2022). Using many different scoring ratings, that are based on the ESG Framework, companies can legitimately evaluate their condition and present their ways of managing the supply chain, carbon footprint, or corporate governance to investors and clients. Implementing ESG shows the maturity of the business processes and the willingness to more precise monitoring of its impact. ESG is seen as a measure of sustainability as companies can properly assess their situation and showcase their methods of controlling. (Bak 2022)

1.2. Applying opportunity recognition as a starting point in Sustainable Entrepreneurship Education

During the SECA project learning events on sustainable entrepreneurship within international intensive study programme in Finland and summer school in Germany, there was actively utilized an approach of opportunity recognition. It is said that "without opportunity, there is no entrepreneurship" (Brühlhart 2013). Opportunity recognition and exploitation is the focus of entrepreneurship education in general according to the scholars (Brühlhart 2013). It is assumed that learners, as a result of participating in entrepreneurship education will recognize an appropriate opportunity in the market and, in the best case, (further) develop it with regards to a corresponding start-up idea (Grichnik et al. 2017). Social innovation also represents an opportunity for an entrepreneur. Social innovation creates business opportunities and synergies that can be utilized if social challenges are better placed at the heart of innovation activity (OECD 2011).

The process of opportunity recognition, the initial step in developing a business idea, can be divided into problem perception and idea generation. It is a form of creative problem solving and an important aspect of entrepreneurship. The literature also distinguishes between opportunity discovery and opportunity creation. Idea generation is a crucial outcome of opportunity recognition, but it begins with problem analysis or opportunity discovery (Jarskog and Stevenson 1996).

Analyzing the literature on opportunity recognition, the process can be divided into sub-steps. Opportunity recognition is classified as a special case of creative problem solving (CPS), which can be divided into two phases: (I) Problem perception and (II) Idea generation. (Hills 1999; Basadur and Gelade 2003; Winzen 2009). This subdivision is also found in other studies, where opportunity recognition is subdivided as opportunity discovery and opportunity creation (George et. Al. 2014). Accordingly, idea generation is to be understood as an important outcome of opportunity recognition, which, however, begins with an initial step of problem analysis or opportunity discovery.

The identification of sustainable business opportunities and problem analysis can be guided by considering sustainability factors in particular fields. The Sustainable Development Goals (SDGs) can provide a helpful framework for pinpointing key areas of focus, especially when selecting specific goals such as climate action. Similarly, when addressing social issues, specific SDGs can be used as a reference point.

The SECA project partners have emphasized opportunity recognition in their sustainable entrepreneurship training as an approach to encourage sustainable mindset and entrepreneurial attitudes. In the International Summer School and the International Intensive Study Programme (IISP), specific SDGs, climate change, and sustainable business cases were approached using a problem identification framework. Among other design thinking is a problem-solving methodology that is often used in conjunction with opportunity recognition to develop innovative solutions to complex problems (Brown 2008) were found useful in the sustainable entrepreneurship training process of SECA project.

1.3. Sustainable Entrepreneurship Education in enabled learning environment

The education of sustainable entrepreneurship requires an enabling learning environment that fosters innovation, creativity, and critical thinking. It is relevant to enable the learner to gain awareness of entrepreneurial thinking and acting in non-traditional learning setting. This is possible above all when situations are created for learners in which they can act independently or gain experience through their own actions (Ebberts 2004). This requires a learning environment in which this thinking and acting can be tried out or simulated in a protected way and without negative consequences (Ebberts 2004). Such experimentation can lead to an initial self-assessment of the ability and willingness to actually become entrepreneurial or not. The aim is to give learners confidence in dealing with entrepreneurial thinking and action. This creates a so-called self-efficacy and the ability to assess oneself as being able to think and act entrepreneurially is promoted. (Bandura 1997)

Particularly with regard to the multidisciplinary and complexity of social innovations (OECD 2011) the learning environment is to be designed openly with plenty of freedom for own experimentation

and the opportunity to experience self-efficacy in a protected space. Non-curricular integrations such as summer and winter schools without exam stress in inspiring premises outside the normal lecture rooms are a good way to create the necessary free space. It is important to make an environment where students can try things out and to develop team skills through intensive social interactions, especially in interdisciplinary teams, as mentioned in the previous chapter. The aspect of sustainability can be taken into account here by sensitizing and motivating the participants with appropriate best practice examples and role models. This can be ensured by having practitioners who are themselves pursuing a sustainable start-up idea enrich the Summer or Winter School with their experience.

Following the idea that teaching concepts have to be designed backward, the concept of the Summer School was developed. “Our lessons, units, and courses should be logically inferred from the results sought, not derived from the methods, books, and activities with which we are most comfortable” (Wiggins & McTighe, 2005). The motivation of students by interacting effects, such as self-efficacy, supportive Environment and value, which can result from attainment, intrinsic and instrumental value (Ambrose et. Al., 2010). Regarding the value, the intrinsic value has to be considered, which represents the satisfaction that one gains simply from doing the task rather than from a particular outcome of the task. The Summer School is neither curricularly integrated nor can a certain result be expected. In the external case one has dealt with an entrepreneurial idea for a week, which then does not turn out to be promising. The program varies on the daily and includes workshops, exciting lectures, joint exchange as well as leisure time. Interdisciplinary teamwork will be included and each participant will receive a certificate of participation after the successful completion

Equipping learners with knowledge, skills, and attitudes to identify and exploit opportunities that address societal needs and contribute to sustainable development can be done the best in such learning environment, that offers a range of resources, tools, and techniques that promote experiential learning, collaboration, and networking. It should also promote the use of sustainable and ethical business practices, which are essential for sustainable entrepreneurship. Ultimately, this type of education equips learners with the skills and mindset needed to create sustainable value for themselves, society, and the planet.

The concept of enabling environments proved to be fruitful in the process of the summer school and intensive study programme.

In the case of the summer school, the variety of learning events included case examples and speeches by entrepreneurs implementing successfully sustainable business practices, site visits demonstrating the practical application of sustainability concepts as well as design thinking workshops to innovate sustainable value for a customer to better understand how sustainability can be incorporated in the real-life situations.

Similarly, during intensive study programme the workshops took place in an environment that is atypical to traditional classroom, with plenty of space and availability of tools for interaction and brainstorming. Real life business cases were incorporated in the process of learning with actual company representatives’ participation and work facilitation.

2. Experience from practice

SECA project is an initiative of three partner universities: Lapland University of Applied Sciences (Lapland UAS), Finland, FH Aachen University of Applied Sciences (FH Aachen), Germany, and Turība University (Turība), Latvia. Three universities collaborated to form a joint Erasmus+ Strategic Partnership project aimed at addressing a shared challenge related to the provision of suitable training and education in sustainable entrepreneurship. The project's main target groups are students, aspiring entrepreneurs, businesses, and people in decision-making positions at all levels, with the ultimate goal of increasing the number of green companies and sustainable thinkers.

Despite the abundance of general information available on sustainability, it has been observed that there is a dearth of methodological approaches for delivering adequate training and education on entrepreneurship that incorporates sustainability as a fundamental aspect of entrepreneurial training. Furthermore, appropriate, easy to access open source digital education

material was not easily available at the time of project initiation. The project, which began in February 2022 and is set to conclude in January 2024, endeavors to address the inadequacy of suitable training and education in sustainable entrepreneurship.

The overall objective of the project is to provide knowledge on how organizations, entrepreneurs, and businesses can become more resilient to climate change. The specific goal is to shift entrepreneurial thinking towards environmental consciousness and sustainability by providing fundamental education on climate change and sustainable business practices. The main target groups are students, aspiring entrepreneurs, businesses, and people in decision-making positions at all levels. The project aims to increase the number of green companies and sustainable thinkers as a result of the training and provision of education material on sustainable entrepreneurship. The failure to adjust to climate change is identified as the most critical risk confronting businesses in The World Economic Forum's annual Global Risk reports (WEF 2023).

The project partners have conducted the supportive study and interviews with selected best practice examples on sustainable entrepreneurship from Finland, Latvia and Germany to derive the main fields of action to foster sustainable entrepreneurship training. In a long run, the project is expected to impact on increased number of green companies and sustainable thinkers, which can indirectly affect all employees and people in their environment, reducing the problems of climate change. The project will deliver a digital handbook for entrepreneurs and decision-makers containing the steps towards resilience to climate change and sustainable start-ups (SECA project 2022).

2.1. Different meanings of terms in the partner countries

In the initial phase of the project, the partners carried out a comprehensive research study to examine the background of sustainable entrepreneurship and gain a deeper understanding of the current state of the field. It was found that there are variations in how different countries perceive the concepts of social and sustainable entrepreneurship, and there is no uniform definition of these terms that is accepted across all European countries.

In Germany, for example, sustainable entrepreneurship is explained as social entrepreneurship and is used as an overarching term. "The primary goal of social entrepreneurship is to solve social challenges. This is achieved through continuous use of entrepreneurial means and results in new and innovative solutions. Steering and controlling mechanisms ensure that the social goals are lived out internally and externally." (SEND e.V. 2021) This is a definition recognized also by the politics throughout Germany, here sustainable entrepreneurship is often seen as a sub topic of social entrepreneurship.

When looking into sustainable entrepreneurship in Finland, they appear to have many different meanings for the topic. Most areas when looking into the topic seem to focus more on people rather than climate action (Kestävän yrittäjyyden). One area of sustainable entrepreneurship is social sustainability. Overall, Finland is considered as a very progressive country for sustainable entrepreneurship. It is marked in the top 10 for most sustainable countries globally, never the less Finland has further plans to improve (Tella 2023).

In Latvia Entrepreneurship means managing risks and processes with the aim of achieving the long-term survival of the company, while taking care of the environment and society (Helmane&Jeramanova-Maura, 2022). It is defined, that sustainable Entrepreneurship have four pillars: economic prosperity, social justice, environmental protection and culture in the community. (KPMG Baltic, 2018)

2.2. Results from interview analysis

As a part of the SECA project's supportive research, interviews were conducted with businesses in Finland, Latvia, and Germany to gain insight into sustainable business practices. The interviews conducted provided valuable insights into best practices, sustainability initiatives in companies, and areas that need improvement (Interviews 2022). It was evident that some companies have already

integrated sustainability into their operations and implemented new approaches, such as the use of the sustainable business model canvas. However, it is evident that sustainability needs to be a comprehensive part of a company's strategy in order to achieve long-term sustainability goals.

The interviews also revealed the need for more education and awareness on sustainability-related issues. Misconceptions surrounding sustainable practices, such as the assumption that recycled or organic products are always more sustainable, were identified as a challenge. Additionally, it was noted that start-ups may struggle to measure the impact of their sustainability initiatives due to a lack of knowledge in this area.

It was apparent that many companies recognize the importance of sustainability and the need for more educational resources on this topic. The interviews provided a useful overview of the current state of sustainable entrepreneurship and identified areas where further progress can be made.

Most companies also agree that climate action and climate protection measures are one of the most important issues to be addressed in the context of sustainability, especially increasing nature's ability to absorb CO₂ and reducing greenhouse gas emissions.

Besides climate action and protection, interview results showed that it is also important to adapt and change social habits to protect the nature for next generations. Some companies suggest that the way to solve sustainable challenges is to make a shift towards a value-creating economy that is viable in the long term, which requires discussions between governments and companies about different ways to measure success and KPIs. They also mention that climate change impacts can be measured through the ecological footprint or KPIs such as the impact of waste products.

Overall, it can be concluded that there are insufficient incentives for companies to adopt sustainable growth tools. Additionally, some companies struggle with the affordability and feasibility of sustainable production, as it may be more expensive or challenging to find affordable suppliers. The problem is not so much about relying on external tools that may yield inaccurate information or lead to flawed conclusions if used improperly. Ultimately, comprehending one's own processes and their interconnectedness is crucial, and being able to analyze one's own data is paramount. The question that should be asked is, "How can I make every step more sustainable?"

2.3. Results from Summer School on Sustainable Entrepreneurship

The Summer School was organized and held by FH Aachen UAS from 22.08.2022 to 26.08.2022 as part of the Seca Project. A total of 27 national and international students participated for one week in the Summer School with a focus on Sustainable Entrepreneurship. The aim was to give the participants an insight into the topic of sustainable entrepreneurship with a special focus on the Sustainable Development Goals (SDGs). The best practices developed in the Seca Research were included. The participants had the task to develop a sustainable business idea within their team in the short time. For this purpose, they were provided with various methods such as the design thinking method.

At the beginning of the event, participants were asked about their level of knowledge about sustainable entrepreneurship. Some already had some prior knowledge of the SDGs, but most had no prior knowledge of the SDGs or of sustainable entrepreneurship. The interest to learn more was very high.

At the end of the event a survey was conducted. The question "How important do you find the topic of sustainable entrepreneurship?" received the highest rating from 50% of the participants and the second highest from the other 50%. To the question "Would you like the topic of climate change to be covered more in your studies? If so, in what form?", a general integration in combination with practical projects was most frequently desired. The participants saw the biggest problems why companies often do not act sustainably in the following aspects: Acting sustainably is expensive and for many still new; there are too lax consequences; lack of awareness; less profitable. All participants agreed that incorporating sustainability into a company or startup can be challenging, but that they still consider it incredibly important and would incorporate it themselves (Summer School, 2022).

2.4. Results from International Intensive Study Programme

International Intensive Study Programme (IISP) on Sustainable Entrepreneurship was organized by Lapland UAS in Finland from the 27th of February to the 3rd of March 2023 as a part of SECA project. One-week study programme focused on sustainable entrepreneurship, with a particular emphasis on design thinking and problem solving. More than 60 participants, students and teachers from Lapland UAS (Finland), FH Aachen UAS (Germany), Turība University (Latvia) and Fontys UAS (the Netherlands), had the opportunity to learn about the SDGs and climate change, as well as explore innovative solutions to societal problems through design thinking method. Throughout the week, participants took part in workshops, company case studies, and an SDG challenge assignment. The event reached its culmination as awards were presented to the most creative teams with the most promising start-up concepts aimed at addressing Climate Change challenges.

From the methodology point of view the focus was on problem-based learning approach (Yew & Goh 2016), that included design thinking approach and application of problem-solution tree tool (Madu, Adesope, & Ogueri, 2018). Design thinking approach is proved to be suitable to define the customer value in business innovation and development (Tschimmel, 2012). It was applied during the workshop of the programme to shift the attention in particular towards the sustainable value creation. It was useful to the practical case study during the visit to Santa Claus Village where students performed an empathy walk to define the problems and needs of the tourism business customers in Lapland region. Problem and Solution Tree (PST) tool was tested in the SDGs challenge workshop. Students were stimulated to define cause-effect relationship to define the most pressing problems causing climate change and with the help of PST they were encouraged to identify potential sustainable business start-up idea and pitch it in short video.

One important goal of the IISP was to test the teaching methods of Sustainable Entrepreneurship and understand the impact of selected methods on students' learning. Preceding the training the students were asked to assess their prior knowledge on the subjects of sustainability, SDGs, climate change, sustainable entrepreneurship, sustainable business models, green skills, social entrepreneurship, methods of how to make business sustainable and whether they are familiar with innovation methods for sustainability. Upon completion of IISP, students were repeatedly asked to what extent their knowledge and skills have improved over the study week programme. In the assessment scale of the survey - one was considered as very little knowledge and five as significant.

Comparing the results we can see that in all areas of knowledge there was remarkable improvement (See Figure 1.)



Figure 1. Survey results prior the training and after training, measured in the scale 1-5 ("1" is very little knowledge, "5" stands for significant knowledge) (IISP, 2023)

For example in the advance knowledge assessment of sustainability, 15 % of respondents felt that their knowledge is poor, 55% of respondents felt that their knowledge is satisfactory and 32% rated their knowledge as good.

After the training, the students felt that their knowledge has increased rather significantly or significantly (69% of respondents) and only 8% felt that their knowledge has improved very little. Similarly the knowledge on SDGs and climate change issues have increased significantly according to the students. It seems that there was considerable increase of knowledge in particular on such subjects as social entrepreneurship and methods how to make the business more sustainable. Similar improvement was observed also in regards to sustainable entrepreneurship. There was obvious change compared to the initial situation where 9% of students marked their knowledge as very poor and 40% as poor. Students admitted that after the training their knowledge on sustainable entrepreneurship improved rather significantly (42%) or significantly (25%), thus most of the respondents found the training useful in developing their sustainable entrepreneurship skills.

3. Key Learnings

The study and interviews conducted revealed variations in how different European countries perceive social and sustainable entrepreneurship. There is no uniform definition of these terms, but some companies have integrated sustainability into their operations and implemented new approaches. Sustainability needs to be a comprehensive part of a company's strategy to achieve long-term sustainability goals. The interviews also revealed the need for more education and awareness on sustainability-related issues, as well as challenges such as misconceptions and difficulty measuring impact. Insufficient incentives and affordability were identified as barriers to adoption of sustainable growth tools. Understanding one's own processes and analyzing data is crucial for achieving sustainability goals.

The Summer School participant teams have all dealt extensively with the topic of sustainable entrepreneurship and were able to apply what they had learned directly by developing sustainable business ideas. They have learned how important it is to anchor sustainability in (entrepreneurial) thinking and action. They also learned how well a project with interdisciplinary people can work through different expertise, experiences and perspectives. For the Seca Project, they were able to test methods for the first time and take away insights into how well teams can work with them, whether the desired results could be achieved and, above all, where there is potential for improvement. Students are keen on knowing more about the concepts and implication for their own projects. Relation to Praxis and Experiences of founders are a great inspiration

International Intensive Study Programme shows that interactive innovation and problem-solving techniques, specifically design thinking and problem tree analysis, have been found to be highly effective. This finding was based on both student feedback and survey results. While the process of intensive learning can be demanding and challenging, concentrating on a specific topic, such as sustainable entrepreneurship and its various dimensions, can yield positive outcomes. In essence, utilizing interactive and collaborative methods can lead to success in addressing complex issues and acquiring knowledge about sustainable entrepreneurship.

Conclusions

1. Sustainable entrepreneurship is essential for the development of sustainable economies and the achievement of the 17 sustainable development goals (SDGs). Sustainable entrepreneurship can have a dual mission of generating measurable social and environmental value and economic returns. However, innovations aimed at addressing social challenges face obstacles related to the multidimensional nature of social challenges and the multiplicity of stakeholders.
2. Sustainable entrepreneurship education development includes key aspects that should be considered across disciplines - deep understanding of the complex interplay between economic,

social, and environmental issues, encouraging the use of innovative solutions to address social and environmental problems, and promoting a multi-stakeholder approach to entrepreneurship. Additionally, sustainable entrepreneurship education should aim to create a culture of sustainability that encourages problem-solving approach, values ethical decision-making, and social responsibility.

3. To enhancing the understanding and application of sustainable entrepreneurship concepts - problem-based learning approach and emphasis on design thinking and problem-solving as a appropriate approach could be used to enhancing students' knowledge and skills.
4. An approach of designing the curriculum that is focusing on self-efficacy and intrinsic value helps motivate students to learn more about sustainable entrepreneurship concepts.
5. Sustainable Entrepreneurship Education needs an enabled learning environment that fosters active and collaborative learning, critical thinking, and problem-solving. It encourages students to take ownership of their learning and apply their knowledge to real-world situations. This type of environment should incorporate modern teaching methods and technology to enhance the learning experience and prepare students to become agents of change for sustainable development.
6. Sustainable entrepreneurship education has the potential to inspire and encourage students to pursue sustainable entrepreneurship careers and contribute to solving societal problems through innovative solutions.
7. By integrating sustainability into entrepreneurship education, we can better equip future entrepreneurs with the skills and knowledge they need to create ventures that are economically viable, socially responsible, and environmentally sustainable.

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