

Emphasizing Sustainability in Entrepreneurship Education: Lessons Learned from a Case Study

Verena Kaiser¹, Małgorzata Krzywonos² and Bettina Maisch³

¹Faculty of Business Administration, Munich University of Applied Sciences HM, Munich, Germany

²Faculty of Management, Department of Process Management, Wrocław University of Economics and Business, Wrocław, Poland

³Faculty of Applied Sciences & Mechatronics, Munich University of Applied Sciences HM, Munich, Germany

Verena.Kaiser@hm.edu

Malgorzata.Krzywonos@ue.wroc.pl

Bettina.Maisch@hm.edu

Abstract: In response to the growing imperative for sustainable entrepreneurship, this study investigates the efficacy of integrating targeted sustainability content into an action-learning-oriented international entrepreneurship course. This case study aimed to evaluate the impact of integrating sustainability content into an existing entrepreneurship course focusing on food-related business ideas to enhance students' sustainability literacy and understanding of sustainable entrepreneurship. Self-reflection protocols of two consecutive student cohorts of the same course were compared before and after the curriculum modification. The results clearly show that both student groups have built up many competencies, and significant knowledge of, entrepreneurial skills. However, the first group built up fewer skills in sustainability. The findings serve as an essential insight for entrepreneurship lecturers who aim to enhance entrepreneurial and sustainability skills among their students, as well as a thorough understanding of impact entrepreneurship. They receive helpful advice on which content to add to their existing entrepreneurship courses to emphasize sustainability.

Keywords: Entrepreneurship education, Impact entrepreneurship, Sustainable entrepreneurship, Social entrepreneurship, Project-based education, International collaboration

1. Introduction

A significant challenge in teaching-learning nowadays is to encourage entrepreneurship among university students (Ratten & Usmanij, 2021; Rauch & Hulsnik, 2015). Another priority is the development of critical competencies for sustainable development within universities (Barth et al., 2007). Therefore, integrating sustainability is a challenge that universities are beginning to address (Salleh et al., 2019). Strengthening students' entrepreneurial mindsets and creating positive social and environmental benefits is a crucial goal (Severo et al., 2019). The authors aimed to emphasize this goal in the entrepreneurship course they had been teaching for seven semesters. Even though they had told their students to make sure the business ideas they developed during the course should have a positive impact on society or the environment, most teams came up with "classic" business ideas focusing on economic aspects only. Therefore, the lecturers decided to include additional sustainability content into the course and to measure the before-and-after learning success. The results provide practical insights for entrepreneurship lecturers who also seek to emphasize sustainability in their entrepreneurship courses.

After explaining the theoretical foundation of this research, the methodology is described. This is followed by the results of the empirical research which are discussed, by implication, regarding both theory and practice. Finally, the limitations of this research are outlined, future avenues for research are presented and conclusions are drawn.

2. Theoretical Foundation

Acquiring sustainability competencies is essential for students and faculty to deal with sustainability topics and to create impact. Education for sustainable development is paramount and the challenges and potentials of this field need to be recognized (Leal Filho et al., 2018). Several studies show examples of combining entrepreneurial and sustainable learning goals into the curriculum (Grimm & Bock, 2022; Krzywonos et al., 2023).

However, integrating sustainability aspects to enhance the environmental or social impact of student business ideas should not be a task by faculty alone. Student involvement in curriculum development is essential and can positively influence the effectiveness and relevance of educational programs. Bovill et al. (2011) suggest that engaging students in curriculum design can increase engagement. They are more likely to develop a sense of ownership for their studies when actively involved in curriculum design. Furthermore, student engagement in

curriculum development may result in enhanced academic performance and a greater enthusiasm for learning (Heller et al., 2010). Additionally, project-based learning approaches focusing on sustainability topics can create societal and environmental impact driven by students (Rajan et al., 2019). Figure 1 shows the theoretical foundation for this research.

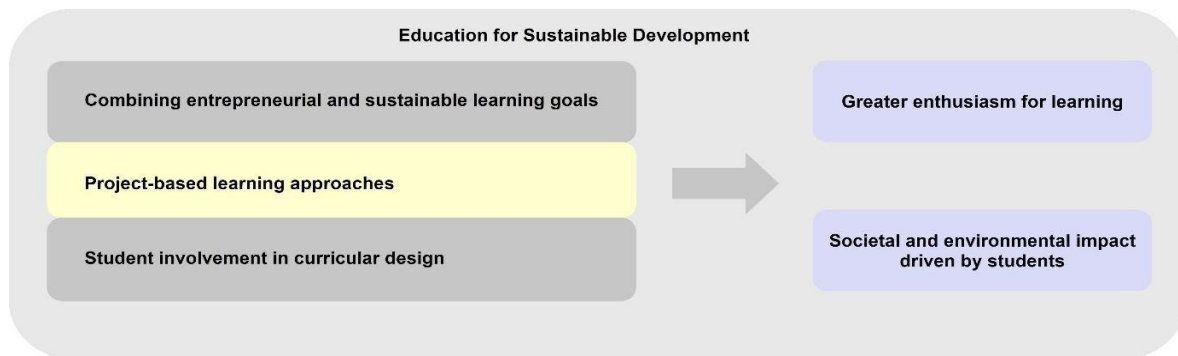


Figure 1: Research framework (source: Own illustration)

The authors aimed to combine entrepreneurial with sustainable learning goals and to involve their students in this effort within an existing project-based, international, and multidisciplinary entrepreneurship course. They wanted to determine whether they could enhance students' sustainability competencies by explicitly adding additional sustainability content and measuring the before-and-after of two consecutive courses. The authors asked the following research question: What is the effect of integrating sustainability content into an existing entrepreneurship course?

3. Methodological Approach: Case Study Research

Coming from a critical realism philosophy and an abductive approach to theory development, mixed method research was chosen using a case study (Yin, 2018). Two consecutive entrepreneurship courses (before and after adding more sustainability topics) served as a comparison for this real-life setting; hence, it was a longitudinal study (Saunders et al., 2023).

3.1 Case Study Setting

The case study's entrepreneurship course was launched in the winter term of 2020 by the Munich University of Applied Sciences (HM). The instructors from the Business School and the Faculty of Applied Sciences and Mechatronics jointly offered an entrepreneurship course focusing on Food and Agriculture, targeting students from their respective departments. The course embraced a problem-based learning approach. Students were tasked to develop an innovative business idea for an existing problem in Food and Agriculture. The lecturers and their business network brought in the challenges to solve. Universities can foster learner-to-content engagement and promote active participation in sustainable initiatives by including real-world projects that build technical and critical thinking skills (Martin & Bolliger, 2018). In the following semester, the course was opened for students from two partner universities: King's College in Kathmandu, Nepal, and Durban Technical University in South Africa; thus, apart from being interdisciplinary, the course became international. The semester after, subject-matter expertise in Food was brought with a lecturer and students from Wrocław University of Economics and Business in Poland, and the course switched to a flipped classroom format. The theoretical underpinnings of the course were delivered via videos that the lecturers had recorded and provided on sce.academy, the Massive Open Online Course (MOOC) platform of the Strascheg Center for Entrepreneurship (SCE), the entrepreneurship center of HM. Students prepared themselves by watching the lecture material before class, which allowed for more coaching and discussion time during classes. Successful founders in Food and Agriculture were invited to give impulse speeches about their as entrepreneurs. Even though the authors continuously emphasized that students should aim for business ideas that impact the environment or society, students often came up with business ideas focusing solely on the economic aspect. Thus, the lecturers decided to add additional sustainability content to the course and measure whether this would raise sustainability literacy and result in business ideas with more impact.

3.2 Changes to the Course Content to Emphasize Sustainability

To create a basis for a sustainability definition and a setting for the course in terms of what impact means, the authors added a flipped classroom lecture on Sustainable Development Goals (SDGs, <https://sdgs.un.org/goals>),

following Popelo et al.'s (2022) advice to align institutional capabilities with global sustainability efforts like the SDGs and the quest to develop courses and activities that focus on the implementation of SDGs in university teaching (Botes et al., 2014; Brugmann et al., 2019).

Additionally, the authors looked at the results from the self-reflection protocols from the summer cohort to assess what type of sustainability content to add. The students were asked (apart from their module assignments regarding their business idea) to write a self-reflection protocol on several predefined questions regarding their learning success and acquired competencies during the course. This self-reflection was marked and resulted in 10% of the final grade. 26,3% of the students mentioned that they needed some slides or introduction material to the topic of sustainability. As one participant phrased it: "There was no basic introduction to the topic of sustainability." (Summer23_RP Food - Reflection 6, Pos. 29). Another recommendation from students was to ask guest speakers to discuss about more sustainable management within their startups.

The authors took this feedback and added two new videos (on Sustainable Business Models and Circular Business Models) and two new readings on Impact Business Models to the flipped classroom platform, taking into consideration Collado et al.'s (2021) advice to develop programmes that focus on innovation for environmental sustainability to create a long-term effect on students' positive ecological behaviours. Sady et al.'s (2019) suggestion to organize extracurricular activities to develop impact-oriented competencies was incorporated by inviting students to participate voluntarily in the Start for Future community (<https://startforfuture.eu>) to get even more international exposure and inspiration from other student teams and coaches. All this additional content was integrated into the course to increase sustainability literacy among students (Albinsson et al., 2020). The next step was to evaluate whether student-perceived sustainability literacy has been increased via the course.

3.3 Data collection and Analysis

Data was collected from participating students from Nepal, Poland, and Germany of the summer term 2023 (19 participants) and winter term 2023/24 (25 participants) via self-reflection protocols. Inspired by the EntreComp Entrepreneurship Competency Framework (Bacigalupo et al., 2016) and the GreenComp European sustainability competence framework (GreenComp, 2022), the self-reflection protocols contained three open questions and five closed questions. The closed questions were collated with Excel. The open questions were analysed using Kuckartz's (2018) qualitative content analysis with the support of MAXQDA. Qualitative content analysis is a technique whereby text, voice, or visual data is categorized by developing and using a systematic coding scheme to enable quantitative analysis (Saunders et al., 2023, p. 584). For this paper, only text data from the self-reflection protocols of the two student cohorts was used.

In the first step, the first author coded 20% of the total material and developed a coding system. The main categories from the coding system were developed deductively, derived from the questions themselves: "What have you learned about entrepreneurship and innovation? How can this knowledge be useful for your future life?" built the main category "Learning outcome entrepreneurship." The questions "What have you learned about sustainability? How can this knowledge be beneficial for your future life?" built the main category "Learning outcome sustainability." Finally, the question "What has not been addressed in this course to address sustainability and foster positive impact generation?" built the main category "Not addressed to foster positive impact generation." The sub-categories for these three main categories were developed inductively and in-vivo during the coding process, and one main category emerged during the coding process: "Other learning outcomes." After the first coder had developed the basic coding system, all authors gathered to discuss it and applied it to two additional protocols. During this process, slight changes to the names of the codes were made, and a new main category, *Influencing factors*, was added, as well as the sub-code *Adaptability*.

The artificial intelligence functionality called "automatic coding" from Atlas.ti 2024 was used to develop a coding system compared to the one created manually. This exercise delivered 674 codes in total. The authors concluded that the level of detail was too high and that the intended aggregation of meaningful categories was not addressed adequately. Therefore, this logic was disregarded. Instead, another artificial intelligence functionality in Atlas was used: coding based on the research question. This exercise delivered 839 codes, and the authors agreed that three of them were meaningful and an excellent addition to the coding system and were therefore added: *Broadening understanding*, *Applicability*, and *Perseverance*. A codebook was created where each code was assigned a definition and an anchor example, making it easier for the authors to discuss the coding system. All changes to the coding system were captured in the logbook functionality of MAXQDA for traceability and reliability. After inter-coder reliability was ensured, the first author manually coded the remaining self-reflection

protocols of the summer and winter cohorts. Finally, the coding system consisted of five principal codes and 13 subcodes. Figure 2 shows the coding system.

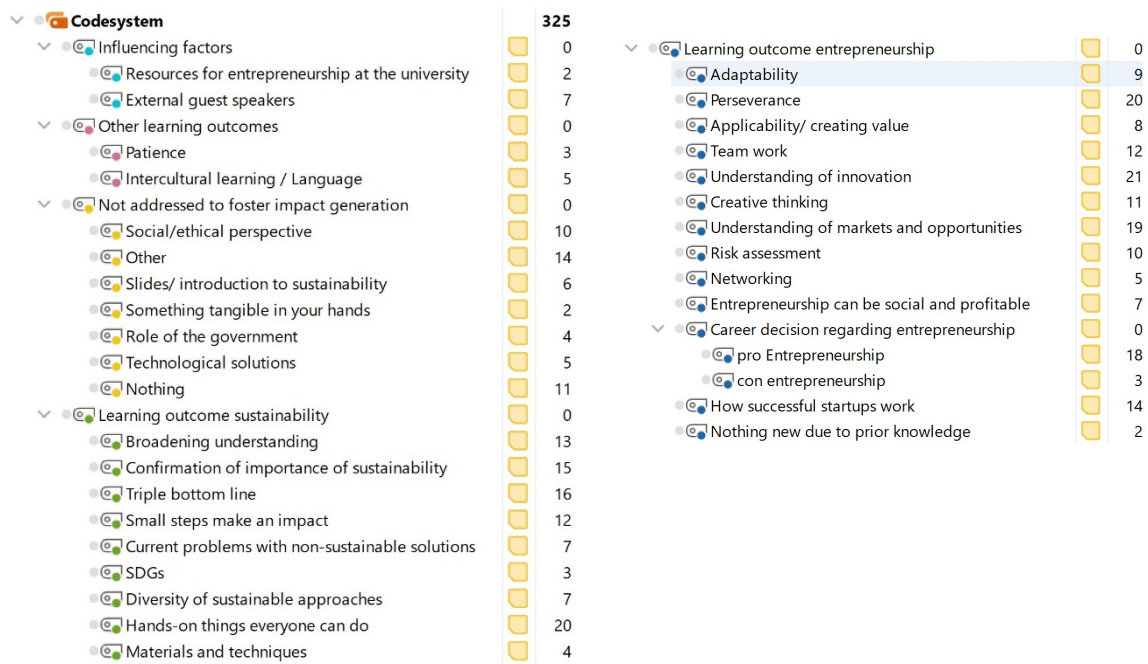


Figure 2: Coding system overview (source: own illustration from MAXQDA)

Besides analysing the open questions with qualitative content analysis, the authors looked at the five closed questions from the self-reflection protocols to answer the research question. Students answered the following questions in a Likert-scale-5 format referring to the skills they had developed during the course.

- How would you rate your knowledge of sustainability in startups?
- How would you rate your knowledge of eco-design?
- How would you rate your knowledge of social sustainability?
- How would you rate your knowledge of life cycle assessment?
- How would you rate your knowledge of Sustainable Development Goals?

The answer spectrum ranged from 1 = I have no idea to 5 = I am an expert in this topic. One student from the winter cohort still needs to fill out these questions. Therefore, N was 24 in the winter and 19 in the summer cohort.

4. Results

To answer the research question: *What is the effect of integrating sustainability content into an existing entrepreneurship course?* The following three questions from the self-reflection protocols were analysed with MAXQDA and compared regarding the two different student cohorts:

- Which topics should be included in this course to address sustainability and foster positive impact generation?
- What have you learned about sustainability? How can this knowledge be beneficial for your life?
- What have you learned about entrepreneurship and innovation? How can this knowledge be beneficial for your future life?

To compare the results of the two cohorts, all analyses were run for summer and winter term students separately. Analyses were run quantitatively first. In a second step, the codes that differed between the summer and winter cohorts in frequency were analyzed qualitatively using the interactive segmentation matrix from MAXQDA, as suggested by Rädiker and Kuckartz (2019). Figure 3 shows a crosstab for proportional code frequency as a quantitative comparison of the two cohorts. Percentages are according to N (meaning multiple mentions within one student protocol are not counted).

Regarding *Influencing factors* or *Other learning outcomes*, nothing surprised the authors concerning the two cohorts. In terms of what was *Not addressed to foster positive impact generation*, 36% of respondents from the

winter cohort mentioned that the social/ethical aspect of sustainability should be further strengthened. On the other hand, 32% of the winter cohort stated that they learned something about the triple bottom line (meaning the holistic view of the environmental, social, and economic dimensions of entrepreneurship; see Baumast and Pape, 2022). Roughly the same percentage in both cohorts mentioned that nothing was missing (26,3% in the summer and 24% in the winter cohort, respectively). Still, the authors will take this feedback and integrate more social and ethical emphasis in the upcoming classes.

Summer Cohort	Total	in % of N	Winter Cohort	Total	in % of N
Influencing factors			Influencing factors		
Resources for entrepreneurship at the university	2	10,5%	Resources for entrepreneurship at the university		
External guest speakers	4	21,1%	External guest speakers	3	12,0%
Other learning outcomes			Other learning outcomes		
Patience	1	5,3%	Patience	2	8,0%
Intercultural learning / Language	2	5,3%	Intercultural learning / Language	3	12,0%
Not addressed to foster impact generation			Not addressed to foster impact generation		
Social/ethical perspective	1	5,3%	Social/ethical perspective	9	36,0%
Other	6	21,1%	Other	8	32,0%
Slides/ introduction to sustainability	5	26,3%	Slides/ introduction to sustainability	1	4,0%
Something tangible in your hands	1	5,3%	Something tangible in your hands	1	4,0%
Role of the government	1	5,3%	Role of the government	3	12,0%
Technological solutions	2	10,5%	Technological solutions	3	12,0%
Nothing	5	26,3%	Nothing	6	24,0%
Learning outcome sustainability			Learning outcome sustainability		
Broadening understanding	2	10,5%	Broadening understanding	11	44,0%
Confirmation of importance of sustainability	1	5,3%	Confirmation of importance of sustainability	14	44,0%
Triple bottom line	8	42,1%	Triple bottom line	8	32,0%
Small steps make an impact	4	15,8%	Small steps make an impact	8	32,0%
Current problems with non-sustainable solutions	4	15,8%	Current problems with non-sustainable solutions	3	12,0%
SDGs			SDGs	3	12,0%
Diversity of sustainable approaches	1	5,3%	Diversity of sustainable approaches	6	20,0%
Hands-on things everyone can do	7	36,8%	Hands-on things everyone can do	13	44,0%
Materials and techniques	3	15,8%	Materials and techniques	1	4,0%
Learning outcome entrepreneurship			Learning outcome entrepreneurship		
Adaptability	3	15,8%	Adaptability	6	24,0%
Perseverance	11	36,8%	Perseverance	9	32,0%
Applicability/ creating value	4	21,1%	Applicability/ creating value	4	16,0%
Team work	9	42,1%	Team work	3	12,0%
Understanding of innovation	10	52,6%	Understanding of innovation	11	40,0%
Creative thinking	4	21,1%	Creative thinking	7	28,0%
Understanding of markets and opportunities	7	26,3%	Understanding of markets and opportunities	12	44,0%
Risk assessment	4	21,1%	Risk assessment	6	24,0%
Networking	1	5,3%	Networking	4	16,0%
Entrepreneurship can be social and profitable	1	5,3%	Entrepreneurship can be social and profitable	6	24,0%
Career decision regarding entrepreneurship			Career decision regarding entrepreneurship		
pro Entrepreneurship	3	15,8%	pro Entrepreneurship	15	56,0%
con entrepreneurship	2	10,5%	con entrepreneurship	1	4,0%
How successful startups work	4	21,1%	How successful startups work	10	28,0%
Nothing new due to prior knowledge	1	5,3%	Nothing new due to prior knowledge	1	4,0%
SUM	124		SUM	201	
N = Documets (self-reflection protocols)	19		N = Documets (self-reflection protocols)	25	

Source: Own illustration from MAXQDA.

Figure 3: Crosstab for proportional code frequency of summer and winter cohort

For *Learning outcome sustainability*, as anticipated, students from the winter cohort gained a broader understanding of sustainability (44% versus 10,5% of the summer cohort) and a more decisive confirmation of the importance of sustainability (44% versus 5,3%). The triple bottom line was mentioned roughly equally, as a few slides on that topic had already been provided during the summer term. However, students in the winter cohort felt more strongly that small steps towards sustainability can make an impact (32% versus 15,8%). They better understood the diversity of sustainable approaches (20% versus 5,3%). With regards to SDGs, this was not mentioned at all as a learning outcome in the summer term, but 12% of students from the winter cohort mentioned it after the authors had integrated a dedicated module on SDGs. This clearly shows the positive effect that the integration of additional sustainability content had on the respective learning outcomes of students. It also becomes apparent when looking at the *Learning outcome of entrepreneurship*. Students from the winter cohort mentioned more frequently (24% versus 5,3%) that learning for them was that entrepreneurship could be social **and** profitable. They also mentioned much more often (56% versus 15,8%) that they could imagine pursuing an entrepreneurial career. This might be because they were amazed by the impact their business ideas could have and inspired to help shape a better future. This is well described by the following two quotes from winter semester participants: “This knowledge has empowered me to consider entrepreneurial ventures with a focus on sustainable practices, fostering innovation that addresses pressing environmental and social issues like

for example, the electricity problem the people in South Africa encountered.” (WS 23-24_RP Food_Reflection 12, Pos. 19). “Moving forward, I am excited to apply the knowledge gained from this course. I am eager to begin conceptualizing, designing, and eventually launching an app that facilitates eco-friendly food delivery.” (WS 23-24_RP Food_Reflection 13, Pos. 7).

The only other difference between the winter and summer cohorts regarding the learning on entrepreneurship was that the summer term students emphasized teamwork much more (42,1% versus 12%). The authors assume this is because the summer course took place on-site and the winter course remotely. Therefore, the summer cohort had more direct team interaction, get-togethers after class, joint breakfasts, etc. However, this effect cannot be attributed to the course content. The other learning outcomes on entrepreneurship were similar in both groups. Similar to typical entrepreneurial competencies outlined in literature (Green Comp, 2022), they were: Adaptability, Perseverance, Applicability, Teamwork, Understanding of innovation, Creative thinking, Understanding of markets and opportunities, Risk assessment, Networking, and How successful startups work. On a side note, there were also a few students whose takeaway from the class was that they are sure never to pursue an entrepreneurial career. This is a fair point, and this realization is appreciated. One student from the winter cohort phrased it pointedly: “I probably will not bring any new inventions onto the market in the future, as it was very nerve-wrecking for me.” (WS 23-24_RP Food_Reflection 2, S. 2)

To summarise, the results from the qualitative content analysis show that the level of knowledge gained in entrepreneurship was similar among the two groups. In contrast, the knowledge gained in sustainability was higher in the winter cohort after adding additional content. This cohort gained a broader understanding of the diversity of sustainability, the SDGs, the triple bottom line, and a more decisive confirmation of the importance of sustainability. Students felt more empowered to take small steps towards sustainability and were more inclined to pursue an entrepreneurial career and develop business ideas with impact. The social/ethical aspects of entrepreneurship should be further emphasised in upcoming cohorts.

The quantitative part of this study focused on five specific areas: sustainability in startups, eco-design, social sustainability, life cycle assessment, and the Sustainable Development Goals (SDGs). Tables 1 and 2 show the results of the two cohorts; each student rated themselves in this knowledge before and after participating in the course.

Table 1: Learning outcome summer cohort, n=19 (source: own illustration).

	1 = I have no idea	2	3	4	5 = I am an expert in this topic				
How would you rate your knowledge of sustainability in startups?						Average	Delta	Median	Mode
Before	1	8	6	4	0	2,68		3	2
After	1	0	4	12	2	3,74	1,05	4	4
How would you rate your knowledge of eco-design?									
Before	10	5	3	1	0	1,74		1	1
After	2	2	8	5	2	3,16	1,42	3	3
How would you rate your knowledge of social sustainability?									
Before	2	5	9	3	0	2,68		3	3
After	1	0	4	13	1	3,68	1,00	4	4
How would you rate your knowledge of life cycle assessment?									
Before	3	6	7	3	0	2,53		3	3
After	0	3	8	7	1	3,32	0,79	3	3
How would you rate your knowledge of Sustainable Development Goals?									
Before	2	4	6	6	1	3,00		3	3and4
After	0	2	2	13	2	3,79	0,79	4	4

Table 2: Learning outcome winter cohort, n=24 (source: own illustration).

	1 = I have no idea	2	3	4	5 = I am an expert in this topic				
How would you rate your knowledge of sustainability in startups?						Average	Delta	Median	Mode
Before	4	11	5	4	0	2,38		2	2
After	0	0	6	17	1	3,79	1,42	4	4
How would you rate your knowledge of eco-design?									
Before	10	9	2	3	0	1,92		2	1
After	0	3	12	7	2	3,33	1,42	3	3
How would you rate your knowledge of social sustainability?									
Before	3	3	13	3	2	2,92		3	3
After	0	1	5	15	3	3,83	0,92	4	4
How would you rate your knowledge of life cycle assessment?									
Before	6	10	7	1	0	2,13		2	2
After	0	2	9	12	1	3,50	1,38	3	4
How would you rate your knowledge of Sustainable Development Goals?									
Before	3	4	10	4	3	3,00		3	3
After	0	1	6	12	5	3,88	0,88	4	4

For the area of eco-design the knowledge gain was roughly the same for both cohorts. For all other aspects, the Average Delta was higher in the winter cohort, especially for the knowledge in life cycle assessment (Delta 1,38 points versus 0,79 points) and sustainability in startups (Delta 1,42 points versus 1,05 points). The knowledge gained on SDGs was only slightly higher in the winter cohort. The Median and Mode analysis also shows a larger knowledge gain for the winter cohort for all areas except for eco-design. These figures are in line with the results from the qualitative content analysis. After adding dedicated lectures on circular business models, SDGs, and specific questions for founders of sustainable startups, the additional knowledge gained by the winter cohort was expected. Interestingly, knowledge gain in social sustainability was even lower in the winter cohort than in the summer cohort. This emphasizes the need to add more of this content in upcoming cohorts of this course.

The research question can be answered as follows: Integrating additional sustainability content into the course material increases students' knowledge. They have a broader understanding and are more eager to apply their knowledge about sustainability to business ideas and future entrepreneurial ventures.

5. Discussion

The results of this case study have implications for theory and practice and possibilities for future research, which are described below, as well as certain limitations.

5.1 Implications for Theory

This study clearly shows a positive effect on students' learning outcomes on sustainability and a deepened desire to pursue impact business models or a future career in impact entrepreneurship, ultimately resulting in societal and environmental impact driven by students. There was also greater enthusiasm for learning among students who developed impact business models as they felt that their actions could lead to positive change. This effect was achieved after entrepreneurial and sustainable learning goals were combined in the curriculum; students were involved in course development based on their feedback in self-reflection protocols and via a project-based learning approach. This is in line with the suggested theoretical framework. It can be further developed and tested and signifies a small contribution to the vast area of Education for Sustainable Development.

5.2 Implications for Practice

The case study reveals hands-on practical implications for the authors as lecturers. It confirms that adding sustainability content encourages students to develop more impactful business ideas during the course and beyond. Based on the qualitative and quantitative analysis results, stressing the ethical and social dimensions is important. Therefore, in the upcoming winter term another flipped classroom video dedicated to this pillar of

sustainability will be added. Additionally, specific challenges will be chosen for students to address social problems within food and agriculture, such as the precarious working conditions of tomato pickers in Italy and asparagus pickers in Germany.

5.3 Limitations

Even though the findings may inspire other lecturers to adapt their entrepreneurship curriculum to emphasize sustainability, they can only be generalized to apply to some university teaching settings (Saunders et al., 2023, p. 214). Regarding reliability, intercoder-reliability (Goldenstein et al., 2018, p. 103) was given in that all three authors agreed and applied the developed coding system, which was additionally cross-checked and enhanced with the artificial intelligence functionality of Atlas. In terms of overall research design, as with any case study, the research is not replicable as the same cohorts of students cannot be retested. Other consecutive courses could replicate the research with the same research questions and methods, but other research teams might come to different conclusions. Semantic validity was ensured as the self-reflection protocol questions were specially developed to answer the research question. Construct validity was ensured in that the setting of the case study was clearly described, and all analysis steps, development of the coding system, etc., were noted in a logbook (Goldenstein et al., 2018, p. 104). Given the fact that both qualitative and quantitative data were used, triangulation was ensured. As the authors are teaching this course themselves, objectivity was not reached. Other researchers with an outside perspective might have come to different conclusions.

Students rated their knowledge before and after the course. However, the evaluation was conducted after the course was finished. This might result in a particular bias as students might have wanted to show the lecturers that they did gain additional knowledge through the course. Asking the *before* questions at the beginning and the *after* questions at the end of the course should be considered for upcoming self-evaluations. Also, the numbers of students in both cohorts, with 19 and 25, respectively, are relatively small for a quantitative comparison. The validity of the data should therefore be treated with caution.

5.4 Future Research

With regards to other lecturers and courses, based on the results of this case study, the following hypothesis can be generated: If dedicated sustainability modules are added to existing entrepreneurship courses, the competency gain in sustainability is higher, resulting in a higher impact of students' business ideas and a higher desire to pursue a career in impact entrepreneurship. This hypothesis could be tested in a quantitative longitudinal study at other universities where students and lecturers are asked to evaluate the level of impact of their developed business ideas on a scale before and after adding sustainability content and their willingness to work in an impact startup.

Another area of future research would be to analyse the business ideas of student teams in more detail to understand what they have been focusing on, how much they contribute to the different SDGs, how they could generate even more impact, and if any patterns emerge that would suggest specific topics that should be further emphasised during lectures. This could be done by interviewing student teams or conducting focus groups and by analysing them through qualitative content analysis (Kuckartz, 2018).

6. Conclusions

To conclude, this case study provides practical suggestions on emphasizing sustainability in the authors' entrepreneurship course, thereby contributing to the academic discussion on Education for Sustainable Development Goals. The results might serve as food for thought for other lecturers and pave the way for future research.

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