CASE
Competencies for a sustainable socio-economic development

PRACTICAL GUIDE FOR COOPERATION
BETWEEN
HIGHER EDUCATION INSTITUTIONS AND PRACTICE PARTNERS

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1 Introduction

1.1 Background and objectives

Fostering mutual learning between students and practice partners needs effective forms of cooperation embedded in an educational setting. Depending on the learning objective, specific types of interaction are suitable, at an intensity of cooperation that best meets the requirements e.g. to tackle real-life challenges for a sustainable business development. Carefully setting up the framework for such a learning environment is a crucial task for meeting respective objectives. Presumed details can make a significant difference as the course-pilots within the CASE project have demonstrated.

Based on these findings, the guide's main objective is to **inspire and** to help teachers to **facilitate** a **successful implementation of cooperation** between students and practice partners. The compiled recommendations may be used for the integration of cooperation in existing courses or for the design and development of new educational offers. As main target groups, the guide addresses teachers, course coordinators, and curriculum developers. For prospective participants, e.g. business representatives, the guide also offers support for decision processes, for instance when it comes to negotiations for resources within a company. During the development process of the guide, it became evident that three main actors contribute to a successful implementation of cooperation: teachers or coordinators at the higher education institution, the students, and representatives from business or organizations. Every participant can benefit in multiple ways, from exchange of knowledge to real-life experience or development of competencies for sustainability-driven entrepreneurship, as shown in Figure 1.1. Furthermore, the experiences from the tested pilots underlined the importance of clarifying the expectations of all cooperating partners. Consequently, the presentation of the guide does not address the various target groups in a customized way, but demonstrates a **holistic picture** of **how to set up and contribute to a fruitful cooperation** in the educational context.

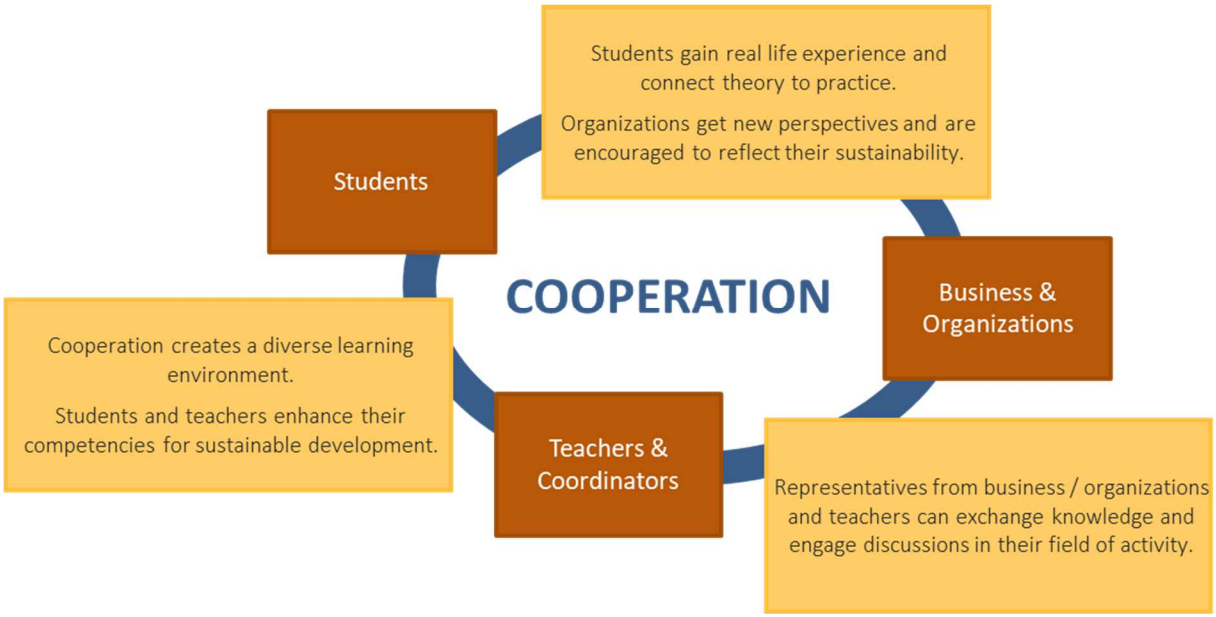

Figure 1.1: Multiple benefits for actors in educational cooperation

As a result of the multi-stakeholder approach, the **common understanding** of educational cooperation generated within the CASE project focusses on mutual learning processes among all partners. The actors meet at eye level, **characterized by respect and openness**, and they are ready to build a **trustful**

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relationship. This was also positively highlighted quite frequently in the piloting process. To promote and cultivate this understanding and quality of cooperation, all forms of cooperation may be supported by an offer of **coaching or mentoring**. This not only enhances learning effectiveness, but also can prevent conflicts or have a mediatory function in critical situations in the collaboration between students and practice partners.

1.2 Elements of the guide

Following the main objectives, inspiration and facilitation support, the guide provides a richness of information and guidance material. This guiding document follows a clear structure that is adopted for every single cooperation format presented. Depending on the complexity and the piloted courses within the CASE project, available support (e.g. templates or contact to experts) is presented according to this structure. The framework for the guide is presented in Figure 1.2 below.

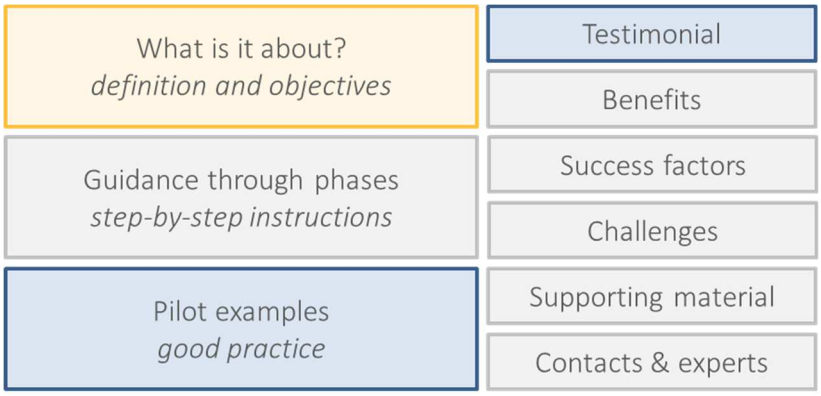

Figure 1.2: Framework for the online guide

The introductory section "**What is it about?**" gives an overview of the respective form of cooperation, including a definition and outlining the major learning objectives. The language tries to be specific, overcoming disciplinary barriers, and yet at a comprehensive level for people with different backgrounds, notably business and academics. Its purpose is to **inform and provide orientation**. For four formats videos have been produced, aiming to strengthen tangibility of content and motivate key target groups to engage and implement cooperation formats.

The introduction is followed by the **core guiding element**, the **step-by-step instructions**. They explain how to implement the cooperation in detail, divided into distinctive phases. The phases vary according to the relevant activities; typically, they comprise time for planning and preparation, a central activity or action, a process of reflection and criteria for evaluation.

The attractiveness of the format to the main actors of the cooperation itself, students and practice partners, is increased by highlighting the **benefits** that are typically related to the format. Especially for companies, it is essential to argue for investing employees' working time and potentially financial resources into educational activities. Students are looking for criteria when selecting optional courses, specialization modules or a whole master. Their personal benefits may be outlined in the syllabus of the course or curriculum of the (master) program.

Designing the process of integrating formats with the practice partner should not be limited to a theoretical process considering eventualities. Based on the practical experience of the pilots, **challenges** and **success factors** have been extracted to improve the implementation from the

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beginning on. Some of the pilot courses have evolved over several years, showing the results of a multi-stage learning process.

To support the implementation, relevant material is available at the online platform (http://www.case-ka.eu) in a dedicated section, "**Supporting material**", divided into tools, templates, literature, and general. It is based on good practice examples used within the piloted courses that have been collected during the evaluation process. For further questions or sharing experiences concerning the implementation, the pilot coordinators or teachers and other helpful contacts are referenced under "**Contacts and experts**".

Besides providing information, the guide intends to generate motivation for cooperation between teachers, students, and practice partners. The presentation of the pilots and implemented projects as **good practice examples** underpins the informative elements. **Testimonials** give a voice to the people who participated in the pilots. Their perspective and authentic experiences make the cooperation more tangible.

2 Cooperation formats

Following the requirements of the CASE project to foster competencies for a sustainable socio-economic development, a diversity in cooperative learning environments between theory and practice plays a crucial role. The pedagogical approach of the Master curriculum on sustainability-driven entrepreneurship demands for specific types of exchange and learning corresponding to the content of each module. Hence, different forms of cooperation were identified on the basis of the respective core aspects or predominant part and classified following multiple criteria. First, three groups were formed – project-based, in the field, and in the classroom – as described in 2.1 and subsequent chapters.

Second, the **formats** were **related to their intensity and complexity of cooperation**. This assignment originates primarily from the pilot evaluation and is subject to variation depending on the manner and quality of implementation. Figure 2.1 gives an estimation where to situate the different formats.

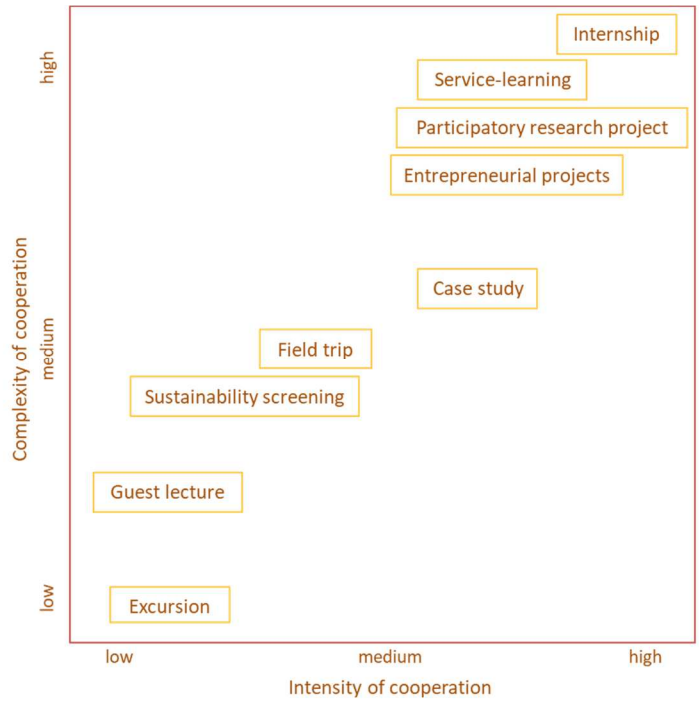

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Figure 2.1: Formats according to complexity and intensity of the cooperation

The most interesting attribution was made to the competencies' framework for sustainability-driven entrepreneurship (http://www.case-ka.eu/competencies/). The pilot testing revealed learning situations where the development of specific competencies was particularly fostered. These observations allow a rough attribution of the involved cooperation format to a competence-field. However, a general rule cannot be derived from this mapping as the learning situations highly depend on many factors such as the detailed course design or the involved personalities. Table 2.1 – Table 2.5 provide examples for each competence-field and describe, how specific cooperation formats and contents of courses help to improve and develop certain competencies.

Table 2.1: Fostering the development of systemic competencies in the context of cooperation

Format	Learning situation fostering systemic competencies
Service Learning	Improved capacity to cope with complexity. Students were able to navigate in complicated and confusing settings and developed the ability to deal with information deficits.
Entrepreneurial projects	Using the Business Model Canvas tool and testing assumptions about the business model for their sustainable business idea, students learned to see the whole and realized that all the parts are needed for successful entrepreneurship (e.g. product or service, potential customers and their needs).
Participatory Research Project	Inter- and transdisciplinary thinking and acting is fostered to co-create knowledge between students from different disciplines and practice partners.
Case Study in Sustainable Development	Working hands-on with a complex sustainability-oriented task requires interaction with various stakeholders. Thereby, students learn to handle different viewpoints and conflicts.
Internship	Students' capacity to analyze complex real-world issues, evaluate difficult situations, and deal with contradictions and uncertainty is fostered.
Excursion	Learning about complex issues and their interlinkages. For instance, awareness was created about the interrelatedness of sustainability challenges.
Guest lecture	From the interaction with the guest, students gain a wide range of experiences from the real world, learning that reality is more complex than theory.

Table 2.2: Fostering the development of anticipatory competencies in the context of cooperation

Format	Learning situation fostering anticipatory competencies
Service Learning	Learning to plan for mitigating the future impact of the company. Students were able to better assess possible changes and their impact.
Entrepreneurial projects	Students learned to work with and understand risks on a deeper level. Although still aware of the risks, they see the possibilities and learned to think new and differently.

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Table 2.3: Fostering the development of normative competencies in the context of cooperation

Format	Learning situation fostering normative competencies
Service Learning	Developing the courage and ability to ask critical questions with partners. Building a sense of responsibility and being honest with the partner about problems experienced. Learning about future work life and the importance of a good work-life balance. Developing an understanding of what is meaningful for themselves and for society.
Entrepreneurial projects	Student groups' common goal to make a positive societal impact with their venture shows that normative competencies underlie the entrepreneurial intentions. Students were seeking cooperation instead of competition (cooperative thinking), for instance when their idea was based on the principle of a circular economy.
Participatory Research Project	Learning to act in accordance with own values in case of discrepancies between corporate attitudes and own understanding.
Sustainability Screening	Learning how to deal with different dilemmas in the sustainability area, particularly related to business practices. Inspiration was gained from companies acting as role models. Recognizing that there often is a gap between academic knowledge and reality.
Internship	Students applied critical thinking and learned to question complex concepts.
Excursion	Critical reflection on prior theoretical knowledge and assumptions was encouraged. Students developed a critical attitude and became more self-reflective as a result of the experiences shared by role models.
Guest lecture	Students are given the opportunities to discuss important topics in a respectful but critical environment.

Table 2.4: Fostering the development of strategic competencies in the context of cooperation

Format	Learning situation fostering strategic competencies
Service Learning	Learning how to set up a project, balancing between freedom and the preset frame. Applying solution-oriented thinking, e.g. making sense of ambiguous demands and condensing ideas into a workable core topic. Plan and work productively and independently. Action competence, assertiveness towards partner to be able to focus on a concrete project and its implementation. Making mistakes can be a special learning experience.
Participatory Research Project, Internship, Field trip comple-	Applying the theoretical knowledge acquired in both a scientific and a practical context within the student project. Connecting what was learned at university with how things work in the real world.

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mented by case study, guest lecture	
Participatory Research Project	Students planned and conducted a participatory research project related to a real sustainability challenge of the partner in a new environment (development of research question, research design, collecting and analyzing data).
Case Study in Sustainable Development	Project management skills are fostered. Students are granted large freedom in designing their project, determining problem definition, limitations, and subsequently planning and running the project in an independent and self-directed matter.
Sustainability Screening	Students were able to tie the theory from the course to a real case company, which deepened their understanding of how sustainability issues play out in practice. Students learned to source relevant information (from annual reports, homepage, interview), how to thoroughly examine a company (business plan, operational levels etc.), and how corporate sustainability performance can be evaluated
Internship	Students plan and realize their project in collaboration with a practice partner while carrying the responsibility for the whole life-cycle of the project from idea to realization. In this process, they deal with complex information in a real learning situation, training their problem-solving competence (e.g. ability to reflect, analyze and solve possible emerging problems). Further, the project work developed students' time- and project management skills and generally improved their action-competence and solution-oriented thinking.
Guest lecture	Gaining a wide range of experiences from the real world, students can link their own ideas directly to the input of the practice actors.

Table 2.5: Fostering the development of interpersonal competencies in the context of cooperation

Format	Learning situation fostering interpersonal competencies
Service Learning, Entrepreneurial projects, Participatory Research Project	Working in interdisciplinary groups required relating different disciplinary perspectives to each other, which developed students' teamwork skills. Students learned to accept different opinions and ideas, coordinate different approaches, and apply a respectful and appreciative approach in mixed teams. Working together with a partner, students could practice and improve their communication and collaboration skills.
Service Learning	Managing group processes. Experiencing both the positive and the negative side of group dynamics. Intercultural learning: students worked in culturally blended teams. Understanding the frame of the cooperation and setting the right focus. Learning about different roles and the dynamics within companies. Stakeholder interaction provided an understanding of people's background and why the act in a certain way.
Entrepreneurial	From the frequent interaction with their external coach, students learned about

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projects	and developed skills to navigate in networks.
Case Study in Sustainable Development	Given that the experiences and the understanding of practitioners and locals were the focus of the investigation, students interacted with a wide range of societal actors, collecting data and getting close insights into their work.
Excursion	Excursions fostered the personal and emotional engagement of the students.
Guest lecture	Making new contacts and having to deal with different opinions and points of view, communication and discussion skills were fostered. Students' learned to have a dialogue at the personal level and contribute to a larger discourse at an abstract level.

2.1 Project-based formats

The highly transdisciplinary forms of cooperation build mainly on project-based learning with the purpose of understanding a specific problem and creating realistic solutions. This learning approach, described by A. Wiek et al. (2014), attributes to the teacher the role of a coach, who provides guidance and tools to implement a professional project management. A further characteristic of cooperation forms in this category is the problem-orientation in the learning process. The students work primarily in interdisciplinary teams, ideally composed by participants from different universities. It is their task to frame the problem and to research relevant information for the solution development (Dobson & Tomkinson, 2012). The formats show quite high complexity due to the strong intensity in corporation and the simultaneous focus on comprehensive content and ambitious methods.

The category of project-based formats comprises the following types of collaborations: service learning, participatory research projects, entrepreneurial projects, sustainable development case study, and sustainability screening (Figure 2.2: Project-based formats).

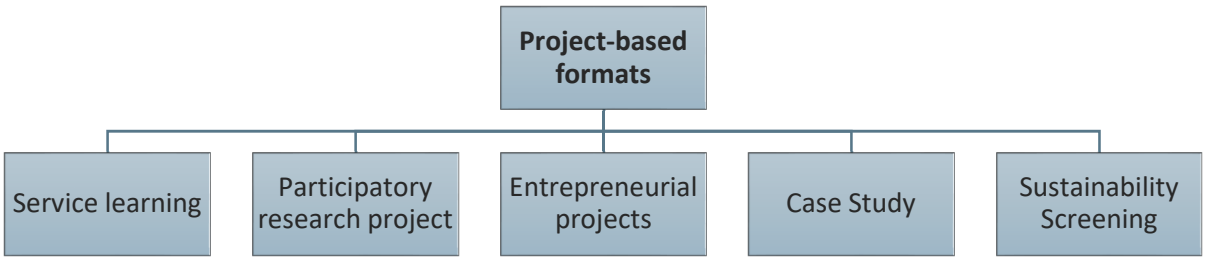

Figure 2.2: Project-based formats

2.1.1 Service Learning

Service Learning or learning by engagement represents one of the most promising methods promoting Education for Sustainable Development (ESD) but also Entrepreneurial Education (EE). It is an alternative teaching approach where students are confronted with real-world problems and try to find solutions cooperating with partners such as communities, NGOs, and companies.

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Students learn and develop through engaging in concrete projects by meeting the needs of communities and making personal experiences, embedded in an academic learning environment where they can reflect upon their actions.

Phase 1 – Planning

Involvement of communities, NGOs or companies demands a well-organized preparation process. Individual consultations to introduce the purpose and design of service learning to project partners are vital. Getting to know concrete project examples, tasks, and possible impact of service learning projects helps to better understand, plan, and implement projects in practice.

Most important is the creation of an inclusive space, based on trust and continuous feedback processes between all involved stakeholders: Be open about different organizational infrastructures, resources and time frames between practice partners and lecturers. Try to communicate transparently and link different involvement of capacities into the learning process.

Phase 2 – Preparation

Invite students, practitioners and university partners for a kick-off event encouraging an inclusive, open atmosphere in the beginning of the course. Student groups (4-5 persons) and partners get to know each other personally and discuss their backgrounds as well as the partners' challenges. Plan such spaces for deliberation processes during all project phases and offer coaching sessions to foster critical dialogue between students and partners. In-class sessions should integrate scientific and non-scientific perspectives and foster co-creation processes of new knowledge.

The service learning approach often challenges students as they must develop the project aim, which collides with traditional educational concepts often oriented towards reproduction of knowledge. Ideally there is a reasonable balance between framing the project challenge, in terms of structuring, and leaving enough space for students' own experiences.

Phase 3 – Action

Innovative potential and creativity of project work is encouraged by interdisciplinary group settings in collaboration with reliable partners, supervised by lecturers. Meetings between students and stakeholders – ideally at the partner's site – are recommended on a regular basis and stimulate students' engagement during project work. This independent working atmosphere allows students to apply and test academic knowledge in real life settings. Learning Diaries help to promote continuous reflection about project experiences.

Phase 4 – Reflection & Evaluation

To bring the projects to a close the implementation/learning process and the results of the projects should be presented. A public event format involving all stakeholders supports dissemination purposes and outreach in a broader context. Critical reflection and open discussions are central for the closing event.

Finally, students should submit project outputs as well as a reflection paper about their project. Evaluation of the process and development is recommended accordingly to participant needs and wishes, experiences of the organization team, lecturers and, especially important, the service learning partners. Particularly valuable is the continuous involvement of partners over a longer period as all stakeholders get more experienced and implementation of the format gets less complex.

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"These projects are the ones that create value, not only within your studies, but also beyond. You can try out, test your skills, get introduced to working life and develop your own projects." Master student in Social Design, University of Applied Arts, Vienna

Benefits	*Success factors*	*Challenges*
• *Creating impact with engagement* • *Joyful and creative working atmospheres* • *Promoting innovative potential via visionary thinking* • *Personal development by taking over responsibility* • *Critical reflection with community*	• *Design projects for real implementation* • *Ensure interactive and creative projects* • *Create projects with visibility* • *Offer coaching and feedback sessions* • *Be aware of peoples' needs*	• *Balance between service and learning* • *Lack of transparency and communication* • *Joint expectation management* • *Ability to deal with failures* • *Task assessment leaving enough room for creativity*

2.1.2 Participatory Research Project

Participatory research projects can be a very suitable course format for strengthening transdisciplinary learning and for exploring community-based research. The idea derives from the need for more responsible research and innovation and addresses the dual challenge of doing "good" research and working with partners outside of academia to respond to research needs that are considered relevant by them.

At the same time, this format enables students to gain (sometimes first) research skills, e.g. to develop research questions, to choose an adequate research design and apply research methods like conducting interviews, participatory observation, writing research journals, etc., and train their personal communication skills.

The overall goal of the format is to promote responsible research in close contact with societal needs and to contribute to local and regional sustainable development.

Phase 1 – Preparation

As preparation for the later project work, students get theoretical input to responsible, participatory research and innovation as well as more generally regarding sustainable development and transdisciplinarity.

This series of theoretic course units is concluded with the presentation of current sustainability-related challenges by the local project partners.

Phase 2 – Research Project

First, the students have to choose a specific challenge to work on. Subsequently, they work in teams together with the local partner where they can apply their theoretical knowledge gained concerning research processes. Regular communication and collaboration with the project partner supports the participatory approach and makes it perceptible.

Phase 3 – Final Presentation

In a joint seminar at the end of the course, the student teams present their project results for the partners. This offers the opportunity for feedback from both perspectives, practice and theory.

"No one wanted to answer our questionnaire, but when a district manager asked to do so, it suddenly worked." Student, University of Vechta, Germany

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Benefits

- *Improvement of problem-solving competencies*
- *Provision of solutions to partner's problems*
- *Learning how to handle frustration*
- *Growing students' awareness about the company*
- *Establishing relationships for future collaboration, e.g. internships or thesis-writing*
- *Providing university insights for companies*
- *New concrete ideas for business*

Success factors

- *Students and partners get to know each other personally and early*
- *Communication support by teachers providing guides and experience*
- *Clear guidelines for cooperation partners*
- *Providing material concerning participative and responsible research methods*
- *Mutual trust between students and partner*

Challenges

- *To be taken seriously as a student by the partner*
- *Providing viable solutions to the problem of the partner*
- *Authoritative attitude by the partner*
- *Students' lack of experience in interacting with public for research*
- *Time as scarce resource for research process*
- *Students' lack of authority towards partners' employees*

2.1.3 Entrepreneurial projects

Developing an idea into a business model is the core concept of entrepreneurial projects. Students can experience what it means to become an entrepreneur in a protected, playful, and realistic environment. In – ideally interdisciplinary – teams, they strive for tackling real-life problems through a business approach.

During this incubation process, they are accompanied by experts acting as mentors or coaches. The format allows the participants to decide whether they pursue their idea into realization or see the course only as a valuable learning experience.

Phase 1 – Planning & Preparation

Define the entry conditions for students – reliable criteria are e.g. with a specific idea, as a team. A careful selection of participants can be achieved through a motivation letter including their idea or field of interest.

The integration of practitioners may be realized either by choosing relevant personalities from you network or by collaborating with an external partner providing start-up support, e.g. an incubator. The format may vary depending on availability, field of activity, location and could be inspired by e.g. guest lectures or excursions.

Phase 2 – Starting Phase

The starting phase is crucial for the atmosphere and dynamics of the whole group. Ideally, start with a kick-off event that brings the participants together and makes the present ideas visible. It is the moment of clarification where to start from and what to aim for. For the final goal of the course there are multiple options: a viable business model (minimum requirement), a solid business plan, a documented prototype or a detailed proposal for funding.

Leaving the usual (university) environment for 3-5 days to work e.g. in a rural area raises the attention and puts the focus on the entrepreneurial project. Besides intensifying the learning process, such a "Start-up Camp" creates a special atmosphere, builds trust and strengthens the commitment of the participants.

Phase 3 – Business Model Development

The path from idea to business is marked by an iterative process of development. The Business Model Canvas by Osterwalder and Pigneur (2010) is a popular tool to support this process; it has been

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adapted by integrating ecological and social impact to the Sustainable Business Model Canvas by Ambros and Schmitz in 2015.

Students work on all elements of the business model simultaneously, considering interrelations and maintaining coherence. The holistic view on the business activity includes reflections on the ecological and social impact. These can be analyzed and demonstrated with the help of the CASE Sustainability Performance Tool or the input-output-outcome-impact (iooi) method[1].

Testing the hypotheses within the business model is an essential step. Depending on the time resources available, a reality-check is made in the form of short interviews or prototyping. A prototype is a small-scale realistic example of the core product and/or service. The tested aspects are evaluated and serve for improvement of the business model.

Phase 4 – Business Planning

A viable business model should be the minimum result of entrepreneurial projects. The potential consecutive step is the transformation of the model into a more detailed and operational business plan. In accordance with the elements of the business model, it further includes concrete milestones, a solid financial planning and a clear communication strategy.

Phase 5 – Final Presentation

A highlight of the course usually is the final presentation. It makes all the efforts visible and offers another possibility to receive feedback from a broader audience. Therefore, a public event represents the ideal solution, also to attract external guests (e.g. investors) and potential future participants.

"The students realize that entrepreneurship is emotional. It is not just calculating numbers or seeing if it is profitable." Teacher, University of Gothenburg

Benefits

- *Discovering, evaluating and realizing innovative business ideas*
- *Fostering entrepreneurial mindset*
- *Learning to understand and handle risks*
- *Promotes creativity and resourcefulness*
- *Contagious enthusiasm between students and coaches*

Success factors

- *Orientation towards implementation of students' own ideas*
- *Creativity-promoting open space within a clear framework*
- *Diversity of knowledge and competences of partners/coaches*
- *Entrepreneurial spirit of the cooperation partners*

Challenges

- *Matching student projects with relevant cooperation partners*
- *Determination of course limits and extracurricular activities*
- *Embedding of sustainability and related concepts*
- *Integrating a "start-up camp" (several days off-university site)*

2.1.4 Case Study in Sustainable Development

The format Case Study in Sustainable Development was developed by Professor Roland Scholz (e.g. Scholz et al., 2006) and is based on transdisciplinary project work addressing relevant and complex societal problems in a local pre-defined context. Each year, a new location for the case study is chosen. Working in interdisciplinary groups, students identify and frame a specific current

[1] Method to measure societal impact developed by Riess, Birgit (ed.) (2010). Using the iooi Method to Plan and Benchmark Corporate Citizenship, Bertelsmann Stiftung.

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environmental problem in the focal area which they subsequently map and analyze with appropriate research methods, e.g. interviews and surveys. Students are granted a large degree of freedom in designing their project. For ten weeks, student groups plan, carry out and evaluate their project based on the problem identified in close collaboration with authorities and other relevant stakeholders. Students bring in experiences and competencies from their diverse fields of study, whereas supervisors from academia contribute with subject knowledge.

The format allows students not only to create transdisciplinary knowledge, they also gain valuable experiences in interacting with diverse actors and stakeholders in society. Students get to practice project management skills, evaluate different types of knowledge and work in an independent, self-directed manner. Furthermore, the format gives students the opportunity to work intensely with the concept of sustainable development in a local context, dealing with opportunities and challenges of the phenomenon in both theory and practice. Students gain an advanced and critical understanding of the notion of sustainable development as a complex phenomenon and strategic tool.

Phase 1 – Planning

Identify a topic for thematic and geographic focus of the case study. The participating students should come from different disciplines and form groups of three to four people.

Phase 2 – Start

First, students execute literature studies and participate at initial lectures on theoretical background.

Second, an excursion is organized to the area under study. The student teams identify and frame a specific problem which they want to address.

Phase 3 – Project development

Over a definite period, the students plan, implement and evaluate a project based on the problem identified in close collaboration with relevant stakeholders, such as authorities, companies, NGOs, and citizens.

Phase 4 – Reflection & evaluation

Each student writes a personal project diary throughout the process to keep track of his/her work progress of himself/herself and within the team.

The work results in a written report, which is presented orally and discussed in class at the end of the course. Depending on the topic chosen, an additional presentation e.g. at a relevant conference can be an opportunity.

"We provided information to one of the cooperation partners that they had an opportunity that they were not aware of. If that will work out, that would make me very happy." Master Student, Environmental Sciences, University of Gothenburg, Sweden

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Benefits

- *Working hands-on with consultant-like sustainability-oriented assignments*
- *Gain experience in interacting with wide range of stakeholders*
- *Opportunity for teachers to develop and improve coaching competencies*
- *Career opportunities and contacts*
- *Learn to define a problem, about focus and limitations of a project*

Success factors

- *Students are granted freedom in designing their project*
- *Excursion, introducing students to the area under study*
- *Teachers as coaches instead of experts*
- *Students acquire in-depth knowledge about local challenges before deciding on project*

Challenges

- *Partners' high expectations on communication skills of students*
- *Coaching to help students to handle problems and stress*
- *Handle diversity and differences in prior knowledge of students in the introductory part*
- *Raising resources for a high quality transdisciplinary course*

2.1.5 Sustainability Screening

Sustainability Screening is based on a case study allowing student groups to investigate and evaluate the sustainability performance of a medium to large-sized company. Companies from different sectors are recruited (e.g. energy, transportation, housing, manufacturing, consulting) allowing students to maximize their aggregated learning experience.

Phase 1 – Preparation

Students are prepared for the task through several workshops where they are familiarized with different frameworks and tools that could be useful for the assessment and analysis of sustainability performance.

They study the sustainability challenges of the company's industry more broadly and, in a first step, collect company data with the help of publicly available information.

Phase 2 – Guided interview

Based on the challenges identified and the company information gathered, students then prepare an interview guide for their pre-arranged meeting with the company's CEO, Corporate Sustainability Officer, or Environmental Manager.

Before conducting the interview, the interview guide is presented in class, enabling students to sharpen their questions.

Phase 3 – Performance analysis and results

Following the interview, students analyze the sustainability performance of their company and prepare suggestions for improvement.

The results of the investigation are summarized in a report that is presented both in class and to the company representative on site.

"It was very inspiring to see companies that deeply implement the three dimensions of sustainability into their strategic agenda." Student, University of Gothenburg, Sweden

Benefits

- *Students learn how to source relevant information*
- *Learning how to deal with dilemmas in sustainability*
- *Acquiring skills in corporate*

Success factors

- *Thorough preparation for the screening*
- *Pre-selection of companies*
- *Pre-arrangement of the interview*

Challenges

- *Gaining a critical perspective on sustainability challenges of companies' industry*
- *Overcoming language barriers (foreign students)*

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sustainability evaluation
- *Reflective and eye-opening process for companies*
- *Confirmation of results of companies' internal investigations*
- *Timeframe at company for questions*
- *Mobility solution for distant companies*

2.2 In the field

The next category of cooperation formats are higher educational offers characterized by a setting with a significant amount of time outside the usual environment such as the university lecture hall. Their main purpose is to not only talk about, but show and make perceptible the practice partners' place of activity. Transdisciplinary learning opportunities are quite important as the proximity to "real-life" typically offers augmented authenticity. Representatives of the cooperating organization act in their "natural" working environment and thus may deepen the students' experience. A possible inconvenience could be a lower readiness to openly reflect upon their work.

Three different cooperation formats are based on experiences gained in the field: internship, field trip complemented by case study as well as excursion, Figure 2.3: Formats in the field.

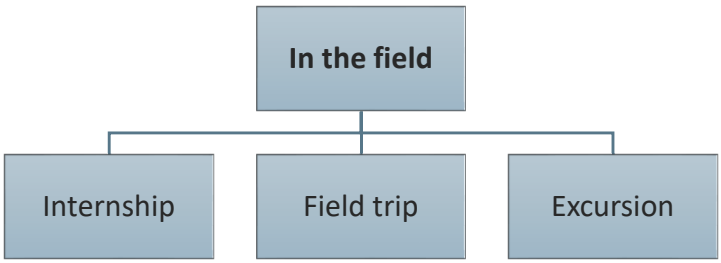

Figure 2.3: Formats in the field

2.2.1 Internship/Practice

Internships relate to the provision of practical experience or training in a specific professional field and shall help linking theory and praxis. Internships can be broadly used in diverse thematic areas and are furthermore excellent opportunities for strengthening cooperation with partners. The overall goal can therefore be described as twofold: 1. Internships intend to provide real-life learning opportunities where students can acquire a variety of useful skills and get an orientation what their future field of action might be; 2. from the perspective of the internship provider the goals might be to offer training to a possible future work force, to engage with young and motivated people and ideally adopt a learning attitude by the institution/organization itself where interns are seen as people with fresh ideas and new looks on procedures or processes.

Internships therefore offer real-life experiences and the possibility to deepen knowledge within an organization – from start-ups to established companies. Providing training on the job, the format is practice- and action-oriented. Internships can either be done in a block, lasting from a few weeks up to six months, or they can be done intermittently, lasting some hours or days per week, in parallel to lectures or seminars during the semester.

The challenge is to link academic knowledge with the practical experiences. Students should be able to apply the theoretical knowledge gained at the university while experiencing the challenges and conditions of the world of practice.

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Phase 1 – Planning

Define selection criteria for internship providers (e.g. start-ups) and start scouting the partners, considering variety. Consult the partners when designing the course to best integrate their expectations. Plan enough time for attracting students after having contracted the partners. A well-prepared promotion campaign using e.g. social media or newsletters helps to find the "right" participants, especially when you aim at mingling disciplines from different universities. Students must apply by sending a motivation letter, their curriculum vitae (CV), and a partner preference.

Phase 2 – Preparation

The partner must find a suitable challenge with clearly defined tasks, responsibilities and roles as they give orientation. The objective is to receive tangible results in the end. Matching the organizational partners needs and students' (preferably as teams of 2-5) profiles is a crucial step. Both receive an extensive briefing concerning expectations and procedures. These two aspects decide substantially on the success of the internship. It is recommended to sign a confidential disclosure agreement for the partners' protection.

Phase 3 – Starting

A common starting event (e.g. "kick-off") brings partners and students together. The matching couples get to know each other and the representatives from the organizations make their final choice, based on but not limited to the proposition from the coordinator.

Phase 4 – Internship

During the internship itself, an agreement between the respective students and the partner on working conditions – like working hours and remuneration – is essential. The presence at the work place and ways of communication must be clarified. Ideally, there is a contact person responsible and available for questions. Regular meetings and a supportive (not lecturing) attitude of the partner will improve the cooperating atmosphere and eventually the results.

A midterm meeting of all participants allows a presentation of interim results, exchange of learnings and experiences, reflection and thus mutual learning. Teambuilding and dealing with conflicts may become relevant issues.

Phase 5 – Final Presentation

Sharing results, experiences and learnings can best be facilitated by organizing a final (public) event. All projects realized during the internships are presented and ideally the contact person of the organization participates with a statement on the relevance of the project results. Additionally, a presentation may take place at the partner organization. Issuing a certificate rewards the students' engagement and may serve as documentation for their CV.

"Our organization benefits from the well-developed and professionally carried out project that was offered by the students." Partner, Social Association, Vechta, Germany

Benefits

- *New ideas, innovative approaches and solutions for organizations*
- *Gaining professional insights into the business world*
- *Tackling practical obstacles, taking*

Success factors

- *Selection of interesting and relevant organizations*
- *Extensive briefing of students and partners*
- *Openness and curiosity of*

Challenges

- *Finding creative and problem-solving tasks (not solely executive)*
- *Matching students' profiles with partners' requirements*

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responsibility for project realization
- *Concrete results, tangible output*

students
- *Partners' commitment in allocating time and effort*

- *Time allocation of students*
- *Offer payment or credit points (ECTS) rewarding the students' work*

2.2.2 Field trip complemented by case study

A field trip is a journey to a place away from usual environment which is attended by a group of students. The purpose of the field trip is to provide insights and direct experience with real-life initiatives and activities in thematic accordance with the visited place.

In this format, however, the field trip is complemented by a case study. It is not only a passive excursion to see interesting places, but a learning opportunity that requires prior theoretical inputs, active participation and interaction at the place itself, followed by reflection of the experience. The students thus get theoretical inputs, already with the knowledge that they will have to use later in practice. Then, they gain practical experience when applying the theory during the preparation, realization, and reflection of the particular case studies.

Phase 1 – Preparation

Theoretic knowledge referring to the context should be imparted in form of a pre-seminar or compact block courses. This may include obligatory readings and ideally reflections on the topics raised before the students get confronted with the real-life conditions. For the case studies, they form groups of 3-5 people and may choose from a pre-selection of enterprises that are part of the cooperation.

Phase 2 – Field trip activities

At the field trip location, students should first get local orientation and knowledge. The one or more representatives of the hosting organization present themselves and share their experiences.

Second, the student groups prepare and subsequently perform their field research. After preparing the own research questions, they design suitable methods to generate relevant data and conduct interviews and thematically focused field research. They learn how to establish contact, build rapport and interact in a culturally sensitive way.

Phase 3 – Presentation and report

At the end of the course, the results of the case studies are presented and summarized in a report. The representatives of the cooperating organizations – as partners of the students' research – should be invited to the final presentation. A possible outcome of the case study could be a set of recommendations for the organization.

"The preparation before the personal interaction with the enterprises is crucial for the students to be clear on what they want to learn." Teacher, Masaryk University, Brno, Czech Republic

Benefits
- *Strong inspirational effect on students*
- *Authenticity of the experience*
- *Enterprises turn into research partners*
- *Meeting students from different cultural backgrounds is enriching*
- *Reflection on own work and its*

Success factors
- *Enthusiastic and well-prepared partners*
- *Allowing sufficient time for the collaboration and discussions with partners*
- *Thorough preparations for the field trip (e.g. readings, reflections and case study focus)*

Challenges
- *Careful preparation of research design by students*
- *Being involved in the partners' activities in some way*
- *Respectful and long-standing relationship with the partners*
- *Good organizational and time planning*

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meaning in a broader context
- *Critical and innovative thinking is fostered*
- *Easy and flexible arrangements between partners and university*

2.2.3 Excursion

An excursion is a trip by a group of people, in this case for educational purposes. As a teaching format, it provides alternative learning strategies for students, adding variety that is beneficial for both students and teachers.

Excursions to pioneers, enterprises, or start-ups in the field of sustainability-driven entrepreneurship, more specifically can help students understand the relevance of a sustainable economy and the need for alternative economic strategies. The format enables students to get to know different examples of sustainability-driven entrepreneurship in a concrete real-world setting. Students can discuss experiences with entrepreneurs as to the challenges and opportunities pioneers face in the emerging sustainable economy. Entrepreneurs can act as role models and activators who provide real-life feedback via their practical examples. Students get acquainted with sustainable entrepreneurs in different fields and learn from their approaches. Moreover, excursions to pioneers can give a practical introduction and illustration of inter- and transdisciplinary teaching and learning approaches. For optimal learning benefit, however, the outcomes of the excursion need to be integrated into the set teaching program.

Phase 1 – Planning

Depending on the purpose of the excursion, carefully chose the period of the year and duration for an optimal benefit from the activity. Consider seasonal or categorical time constraints at the partner's location. For diversity, visit various practical actors, for more profoundness, plan a longer stay at one destination (up to several days). Clarify the possibilities of mutual learning between the partner organization and the students. Define the involved actors (e.g. employees), the form (e.g. discussion) and a respective time frame.

Foresee arrangements for transportation and, if necessary, for accommodation well in advance.

Phase 2 – Preparation

Contextual theoretic knowledge can be imparted in form of a pre-seminar or compact block courses. This may include readings and reflections on the topics raised before the students get confronted with the real-life conditions.

Phase 3 – Excursion activities

First, get to know the place e.g. through a tour and presentation by the local host. Sharing the concept, activities and experiences are valuable insights before starting a discussion or another form of exchange. Ideally, students receive the opportunity to engage by participating at workshops or activities. Thus, the students can give feedback and bring in different perspectives from outside the visited organization.

Phase 4 – Reflection

At the end or after the excursion, time for reflection should be granted. To intensify the experience, a written format can be chosen.

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"It was really interesting and enriching to meet the farmers and listen to them talking about their experience in the authentic environment on the farm, where we could see how everything works." Master Student, Environmental Humanities, Masaryk University, Brno, Czech Republic

Benefits

- *Opportunity to share the partners' work with students*
- *Critical reflection on prior theoretical knowledge and assumptions*
- *Learning about different techniques, processes, conditions and consequences*
- *Personal and emotional engagement*

Success factors

- *Prior knowledge of and experience with the partner is a plus*
- *Open-mindedness of the partner and employees*
- *Arranging transportation far enough in advance*
- *Possibility of perception of impressions with all senses (visual, sensory, smell etc.)*

Challenges

- *Length of the excursion to be long enough for students*
- *Length of the excursion to remain manageable for the partner*
- *Scheduling the excursion at the most interesting period of the year (e.g. ecovillage in summer)*
- *Organizational efforts for longer excursions (over several days)*

2.3 In the classroom

When investigating possible cooperation options in the classroom the evaluation focused on courses that added a transdisciplinary perspective by inviting guest lecturers and speakers as external experts.

Though being the least complex form of implementing a cooperation, it still allows an important mutual exchange between students and practice partners. To make the encounter successful, an appropriate embedding into a course and careful preparation and reflection is essential.

2.3.1 Guest lecture

The invitation of experts or guest lecturers is a collaboration format that can facilitate transdisciplinary learning and is usually simple to implement. In the setting of sustainability-driven entrepreneurship, guests could be from sustainability-driven enterprises, start-ups, or incubators. Guest lecturers provide an important educational experience for students based on their real-world life experiences. Students get to see the insight and perspective of the guest lecturers' specific field. The format can enable students to interact with professionals in formal and informal settings. Through discussions, interpersonal competence and communicative skills are fostered. Guests' contributions can take the format of a single lecture, a lecture series (e.g. along a specific period like one month or one semester) or workshops (with different time length according to the specific needs. E.g. a whole-day workshop allows more time for interaction and practical exercises than a rather short workshop of 1-2 hours).

Another benefit is the link that students get to make between what they learn in their textbooks and the experiences shared by the guest speaker. Students thereby build important connections between what they have learned and the real world.

Phase 1 – Planning

Depending on the overall design of the course, the framework of integration including the selection criteria of guests is set. A choice of people based on personal contacts of the teacher works fast but can be limiting. A mix of proven and new lecturers is recommendable to bridge this gap.

Phase 2 – Preparation

Careful preparation of the setting is required to use the full potential of this format despite its relative simplicity. An extensive briefing of guest lecturers about the course setting and aims is key to clarify

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expectations and set a fruitful frame for the corporation. A more profound approach would let the guest lecturers participate already in the design process of the course. Students should be informed about the personal background of the guest in order to prepare adequately for the unit. Ideally, students prepare for the guest lecture by doing some selected readings.

Phase 3 – Guest lecture unit

To make optimal use of practitioners' knowledge and experience, guest lecturers can be asked to give feedback on student work during their visit. This should be communicated in advance and sufficient time must be reserved.

The exchange between the students and the external guests can be fostered through a dedicated space for a vital discussion. Relevant questions should be prepared by the students beforehand, especially when they are asked out of a critical point of view.

Phase 4 – Discussion & reflection

After the visit of the guest lecturer, time for reflection helps to link back to the academic perspective of the course topic.

"I learned that having doubts and uncertainties is part of the everyday working reality and that you can learn to deal with that." Student, Free University of Bozen-Bolzano, Italy

Benefits

- *Improve the ability to think critically*
- *Students linking own ideas directly to the input of practice actors*
- *Guest lecturers get in touch with young, motivated people*
- *Personal contact with teachers appreciated by guests*
- *Practical knowledge transfer to younger generation*

Success factors

- *Minimized bureaucracy according to formats' low complexity*
- *Interactive elements encouraging students to actively participate*
- *Availability of guest lecturer(s) for feedback, questions and discussion*
- *Flexibility of teacher concerning the needs of the guest(s)*

Challenges

- *Avoiding overlap in the guests' contribution to a topic*
- *Balanced division of time for input and discussion*
- *The guest lecturers' availability for students before and/or after the course unit*
- *Teacher should be prepared for intervening if necessary*

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