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From information to empowerment: Teaching sustainable business development by enabling an experiential and participatory problem-solving process in the classroom



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ABSTRACT

The aim of this paper is to present a teaching concept by which students develop a solution to one concrete challenge posed by the SDGs via a structured participatory process. The aim of the concept is twofold. First, to create an active learning process in which students move from being informed about the pressing challenges described by the SDGs, i.e., from a mere passive-learning setting to developing possible solutions on their own. Second, it aims to provide students with a concrete tool by which they can implement a participatory process in their future professional endeavours. For this, a five-level teaching concept – the Public Participation Spectrum (PPS) developed by the International Association for Public Participation (IAP2) – was used as structural framework. Our proposed concept is based on a thorough literature review on teaching sustainability to business students, and on a case study about a pilot course implemented with undergraduate students. In the pilot course, the content-related objectives could be achieved satisfactorily. However, after evaluating the extended feedback given by the students and the experience of the teacher, it seemed obvious that the applied collaborative learning experience among peers and the cooperation with external stakeholders needs to be specifically addressed and enhanced.

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1. Introduction

The Sustainable Development Goals (SDGs) proposed by the United Nations remind us that the most pressing challenges posed by extreme poverty and destitution can only be solved through the combined contributions of all sectors of society, including private business (United Nations, 2016a). However, achieving the active participation of private business actors is not an easy task. According to a global scale survey of ca. 3,500 executives conducted by McKinsey, there is a clear commitment for sustainability and responsible leadership among them. But while executives increasingly acknowledge their responsibilities as business leaders in society, they still struggle to cope effectively and strategically with some of the most pressing social and environmental challenges (McKinsey and Co, 2014).

What are the qualities and skills future management will need to address and master the role of business in changing societies? Integrity and self-efficacy may be needed increasingly. Ability and skills like critical, creative thinking, the ability to communicate and to manage complexity will be very sought after skills, as well as the ability to collect, extract and present

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information (Painter-Morland et al., 2016). Business education thus needs to question its ability to contribute to these future needs of management and the capability to participate in change (Audebrand, 2010; Du, Su, & Liu, 2013; Painter-Morland et al., 2016). Moreover, research in this topic stresses the importance of collaborative competencies, i.e. those that include the ability to engage effectively with experts and stakeholders, especially by facilitating participatory research and collaborative decision-making (Barth, Godemann, Rieckman, & Stoltenberg, 2007; Sipos, Battisti, & Grimm, 2008; de Haan, 2006). Brundiars, Wiek, and Redman (2010) further emphasise that “the motive for solving sustainability problems stems from a sense of solidarity with people and the natural environment. It is difficult to imagine making the effort necessary to accomplish the goals of sustainability in the absence of that motive” (p. 310).

Following these premises, the aim of this paper is to present a teaching concept by which students are guided in a process that will enable them to develop exemplary solutions to one concrete challenge posed by the Sustainable Development Goals (SDGs) – namely SDG #1: poverty alleviation – via a participatory procedure. The objectives of a course in which this concept is applied can be twofold. First, to create an active learning process in which students move from being informed about the pressing challenges described by the SDGs, i.e., from a mere passive-learning setting, to developing possible solutions on their own. For this, the developed five-level teaching concept will apply an experiential problem-based learning approach.

Second, this concept aims to provide students with a concrete tool by which they can implement a participatory process in their future professional endeavours. In educational systems and institutions, teachers and students can be considered as part of an interconnected network of stakeholder relationships — working collaboratively and thereby effecting and influencing each other. While the agreed upon outcome of a teaching process, the ‘objective’ may not have been developed ‘jointly’, there still is a mutually agreed upon learning objective in higher educational systems for each course. And not only are the students stakeholders in their relationships to teachers, they also serve as stakeholders on a peer level, able to effect and influence each other. Hence, it is possible to enact a participatory stakeholder engagement process in class.

Concerning this aspect, we chose to base our concept on the ‘Public Participation Spectrum’ (PPS), a participatory stakeholder engagement¹ process developed and proposed by the International Association for Public Participation (IAP2). The IAP2 is an international organisation actively supporting research and professional development training and services. It has developed a five-step-model of interaction to enhance improved decision-making in participatory processes.² The PPS has been originally designed for participatory processes in policy-making. It consists of five levels of engagement: Inform, Consult, Involve, Collaborate, and Empower. Public Participation is a practical approach to reach jointly agreed-upon outcomes considering heterogeneous interests of diverse groups or individuals. This concept refers to the involvement of those potentially affected by a decision, activity or project to understand and consider their interests. While it is seen as a method to involve stakeholders who are affected by a decision in the decision-making process, it is also used to co-create and promote viable and sustainable outcomes.

Our paper is structured as follows: The first part of the paper describes our findings of the literature review on teaching sustainability in business schools and universities. We will also briefly discuss the role of the business sector in poverty alleviation. In the following section, we will describe a case in which a problem-based learning strategy using the PPS as framework was applied in a real class setting to teach business ethics and corporate social responsibility. Both the teacher and the learners evaluated the teaching and learning experience of the course. Based on the learnings of our case study, we conclude with the development of a course to teach business strategies to alleviate poverty using the PPS framework. The paper concludes with a discussion on decisive factors for learning success.

2. Teaching sustainability by problem-based learning and experiential learning

Our review on current teaching approaches for sustainability issues reveal a clear tendency to apply problem-centred or problem-based learning (PBL) strategies, as well as experiential learning, i.e., what Brundiars et al. (2010) call “real-world learning opportunities”. Table 1 provides an overview of approaches to teaching sustainability found in the literature. Our review was guided by the following questions: 1) which are preferred strategies to teach sustainability at business schools?; 2) are collaborative competencies stressed in these strategies?; 3) what do researchers propose as success factors for developing and applying teaching concepts in sustainability?

A substantial amount of researchers in this field discuss particular pedagogical approaches to support the implementation of sustainability topics into business education. Audebrand (2010) examines the exploratory and generative impacts of metaphors on students’ understanding of the complex and paradoxical character of sustainable strategic management. Moreover, according to Shrivastava (2010), business students need to develop passion for sustainability. In line with this, the author argues for a holistic pedagogy that “integrates physical and emotional or spiritual learning with traditional cognitive (intellectual) learning about sustainability” (Shrivastava, 2010, p. 443). A course on managing sustainability with passion needs to include an appropriate analytical content, so that students can identify concrete sustainability issues in their lives and their social relationships. Additionally, the course needs to challenge them physically (e.g., through outdoor hikes) and emotionally (e.g., through experiencing emotions in settings that are novel to themselves).

¹ According to the Canadian Stakeholder Research Associates, stakeholder engagement is defined as the “... efforts to understand and involve stakeholders and their concerns into (an organization’s) activities and decision making processes” (Stakeholder Research Associates, 2005, p. 6).

² International Association for Public Participation. P2 Practitioner Tools. Retrieved from www.iap2.org.

In another study, [Du et al. \(2013\)](#) describe PBL as an effective teaching approach from which learners can develop sufficient skills such as collaboration, communication, interdisciplinarity, innovation and social responsibility, which are crucial in dealing with sustainability issues. Through the analysis of the implementation of PBL in a given cultural context, the authors develop a framework for change in educational culture towards sustainability. Furthermore, they argue that new approaches in sustainability education “will lead to a series of changes such as individual opinions, attitudes, cognition and affection, interpersonal relations, communication, teaching and learning methods, participation, integration, etc.” ([Du et al., 2013](#), p. 83).

[Brundiens et al. \(2010\)](#) draw on dominant real-world learning opportunities including project- and problem-based learning. The authors describe three clusters of key sustainability competencies that can be built up through real-world learning opportunities:

- 1) The strategic knowledge cluster, which integrates systemic, anticipatory and action-oriented competencies to deal with diverse opinions, perspectives, and strategies;
- 2) The practical knowledge cluster, which involves competencies necessary for linking knowledge and action for sustainable development; and
- 3) The collaborative cluster, which includes competencies in engaging with experts and stakeholders.

Furthermore, these authors perceive the coordination of sustainability courses within the curricula and their integration in general introductory courses for undergraduate courses, as well as opportunities for collaborative research between academic researchers and practitioners as critical success factors of real-world learning opportunities in the field of sustainability.

These findings are in line with another area of research in this field, which focuses and emphasises on the collaborative process necessary for teaching sustainability issues. In a more recent publication, [Brundiens and Wiek \(2013\)](#) examined partnerships between university and private organisations as innovative approaches for designing problem- and project-based learning courses in sustainability. They identify a series of benefits of such research collaborations, e.g. these allow considering multiple perspectives and thus improve problem understanding. Also, the authors identify normative benefits – such as eliciting and negotiating values and preferences, as well as instrumental ones, e.g., developing legitimate processes and linking knowledge to action.

[Setó-Pamies and Papaoikonomou \(2016\)](#) draw our attention to inter-organisational cooperation-processes. According to them, a successful integration of ethics, CSR, and sustainability in business education needs to apply a joint approach in an educational organisation between instrumental level – e.g., specific methodologies –, curricular level – course design, modules –, and institutional level, which implies collaboration of different faculties and research areas. In line with this view, [Bacon et al. \(2011\)](#) emphasise the role of interdisciplinarity in project-based learning-approaches for sustainability. Particularly, the focus of their study lies on the encouragement of student-led group projects to invite collaboration and cooperation in a system that typically rewards individual learning and competition.

2.1. *Enabling business students to find solutions to fight poverty*

As in our proposed teaching concept we focus on the development of business solutions for reaching SDG #1–poverty alleviation, we will now briefly refer to research in this topic.

As years of poverty research by scholars and international organisations have shown, especially those conducted by The World Bank, OECD, and the UN, poverty is a complex phenomenon, which affects different regions and sectors on different levels of intensity, and also has numerous causes ([Mercado, Ortiz, & Scotti, 2016](#)). Empirical facts tend to stress the relationship between poverty reduction and economic growth. Maddison remarks that between 1913 and 1950, the world economy grew by an average of 1.82 percent per annum. Later, during the second half of the 20th century, growth accelerated to 3.97 p.a. This led to a sharp reduction in poverty, in spite of much higher rates of population growth ([Maddison, 2003](#)). World Bank economists [Ferreira and Ravallion \(2009\)](#) state that there is evidence of a decline in absolute poverty – i.e. the percentage of the world population living with \$1.25 or less a day – in the developing world over the last quarter-century, from 40 percent of the population in 1981 to 18 percent in 2004. We can therefore imply a positive relationship between poverty reduction and economic growth (see also [Dollar & Kraay, 2002; 2013](#)).

However, it is also a fact that some conditions in quality and availability of the factors of production influence the positive correlation between human development, including poverty reduction, and economic growth ([Yusuf, 2011](#)), and thus business strategies aiming at helping the poor need to be “inclusive”. Inclusive business models are defined by the UNDP as models that “include the poor on the demand side as clients and customers and on the supply side as employees, producers and business owners at various points in the value chain. They build bridges between business and the poor for mutual benefit. The benefits from inclusive business models go beyond immediate profits and higher incomes. For business, they include driving innovations, building markets and strengthening supply chains. And for the poor, they include higher productivity, sustainable earnings and greater empowerment” ([UNDP, 2008](#), p. 14).

As an example, strategies aimed at serving “the bottom of the pyramid” (BOP) ([Prahalad, 2006](#)) and eradicating poverty need to precisely specify their target population and the needs which they want to serve, if they want to do so effectively. In addition, they should not consider the poor solely as consumers or end-users of concrete products or services. The concept of

Table 1
List of reviewed articles on current teaching approaches for sustainability issues.

Authors	Approach for teaching sustainability issues	Statements about the need for cooperation	Main characteristics of an effective teaching concept
Audebrand (2010)	<ul style="list-style-type: none"> metaphors to understand the complex and paradoxical character of sustainable strategic management 	<ul style="list-style-type: none"> no information 	<ul style="list-style-type: none"> using the explicatory and generative impacts of metaphors to help understand and evaluate real-life interactions
Bacon et al. (2011)	<ul style="list-style-type: none"> interdisciplinary, project-based learning encouragement of campus-community relationships through student projects 	<ul style="list-style-type: none"> imperative of emphasising student-led group projects to invite collaboration and cooperation in a system that typically rewards individual learning and competition 	<ul style="list-style-type: none"> needs much time and effort of teaching staff
Brundiers et al. (2010)	<ul style="list-style-type: none"> PBL as a very specific form of real-world learning opportunities 	<ul style="list-style-type: none"> sense of solidarity with people and the natural environment is a central motive to accomplish the goals of sustainability 	<ul style="list-style-type: none"> key sustainability competencies are grouped in three clusters: strategic knowledge cluster, practical knowledge cluster, and collaborative competence cluster all of these competencies should be addressed in real-world learning opportunities
Brundiers and Wiek (2013)	<ul style="list-style-type: none"> transacademic partnerships between university and private organisations as innovative approaches for designing problem- and project-based learning courses in sustainability 	<p>Research collaborations provide a series of benefits:</p> <ul style="list-style-type: none"> <i>including approach</i> (e.g., accounting for multiple perspectives, for improving problem understanding and developing solution options) <i>normative approach</i> (e.g., eliciting and negotiating values and preferences) <i>instrumental approach</i> (e.g., developing legitimate processes and linking knowledge to action) 	<p>Three main challenges for designing, implementing, and evaluating problem- and project-based learning courses:</p> <ul style="list-style-type: none"> clear definition of learning objectives using design criteria and practical experience for incorporating a strong transacademic approach accounting the key principles including self-directed learning and advanced team working
Du et al. (2013)	<ul style="list-style-type: none"> PBL enables development of sufficient skills relevant to sustainability: collaboration, communication, interdisciplinarity, innovation, social responsibility 	<ul style="list-style-type: none"> importance of implementing a “Community of Practice” – this change of sustainability education will lead to a series of changes such as individual opinions, cognition and affection, interpersonal relations, collaboration, etc. 	<ul style="list-style-type: none"> PBL practice is, to a great extent, dependent on its surrounding culture and context needs a framework of change
Setó-Pamies and Papaoikonomou (2016)	<ul style="list-style-type: none"> PBL as an integrative holistic approach to guide the integration of ethics, CSR and sustainability in management education that aims to improve students' knowledge and attitudes 	<ul style="list-style-type: none"> successful integration of ethics, CSR, and sustainability in management education needs to focus on a joint approach between the curricular level, the instrumental level, and the institutional level, especially the collaboration of different areas of research and practice 	<p>Multilevel framework with three interdependent levels of analysis:</p> <ul style="list-style-type: none"> macro level (faculty and university) curricular level (course design, modules) instrumental level (specific methodologies)
Shrivastava (2010)	<ul style="list-style-type: none"> criticism of sustainable management courses replete with scientific facts, analytical tools, optimisation models, and management techniques pleas for identifying options for including physical and emotional components in sustainable management courses 	<ul style="list-style-type: none"> no information 	<p>Pedagogy of “passion” for sustainability holistically applies different components:</p> <ul style="list-style-type: none"> analytical/cognitive (identifying own activities of bringing sustainability into own life) physical (challenge ourselves physically, e.g., yoga, pilates, outdoors hikes) emotional (seeking out and experiencing emotions in settings that are novel to oneself)

inclusive markets requires that the poor also be regarded as entrepreneurs, co-inventors, employees, and even partners. In other words, inclusion means collaborating and deploying their talents and assets throughout the whole value chain (Kolk,

Rivera-Santos, & Rufin, 2014). As research in this area has already shown, good intentions alone are not enough, and impact can only be measured if strategies are focused. The necessary implications and outcomes of different strategies for different target groups affected by poverty need to be addressed in more detail. In this sense, it may prove useful to consider and apply in class the research findings of economic studies in this area (e.g., Banerjee & Duflo, 2011).

But not only that, the solutions developed will depend on business students' capacity to conduct a dialogue with the relevant stakeholders, as well as their target populations, and work collaboratively with them. In other words, solutions depend on their ability of listening to different points of view and adopting them into their own problem-solving paradigm. In this sense, we follow Nahi's (2016) conviction that, in order for BOP initiatives to address the structural drivers of poverty, deep co-creation is necessary. Nahi conducts a review of BOP research on co-creation and develops a definition of the term: "co-creation at the BOP can be defined as iterative interaction that empowers poor communities and integrates their knowledge and capabilities with those of a company and other actors throughout the process of planning and realizing novel business models and ecosystems" (p. 428).

According to Nahi's review, co-creation as BOP strategy can have four main purposes: boosting corporate legitimacy and networks, building business models and ecosystems, ensuring social and environmental value, and empowering poor communities. The first two are central from a mere business perspective, the latter two focus additionally on addressing the structural drivers of poverty. As the literature on the topic points out, BOP ventures often have multifarious unexpected impacts, e.g. a reduction of well-being as a consequence of the social disruption certain products or services can have on the target territory. Co-creation with local communities and experts can help in mapping these and other impacts.

We find this collaborative aspect especially important in the education of business students, as they tend to be formed according to an all-encompassing paradigm in which opportunistic and selfish behaviour is encouraged and seen as norm, and thus the pursuit of a commonly sought good by business and societal actors is more or less excluded by definition. According to Ghoshal (2005), in many cases "business schools have actively freed their students from any sense of responsibility" (p. 76).

Moreover, sustainable development of society is not a goal that can be achieved by individual players by themselves while excluding others from the process, it is a good that is necessary for the survival of every firm but cannot be achieved by any firm individually. Thus, the opportunistic and often individualistic mental models of business students need to be challenged by more collaborative ones (Werhane, 2008).

3. Case study: applying a collaborative problem-based learning approach in an undergraduate business course

As the literature review showed, two main strategies were identified in the specialised literature as being effective ways of teaching sustainability issues: *action and experiential learning* and *problem-centred or problem-based learning (PBL)*.

The first strategy, *action and experiential learning*, involves activities in which students learn by doing. Authors describe active learning as more effective than passive learning concepts. The objective of this technique is to develop "cognitive engagement" by involving students in problem formulation, research about the relevant topic, problem solving and critical reflection (Figueiro & Raffluet, 2015). A vast number of different tools can be applied to achieve this objective. Apart from case discussions and debates, several authors describe games (e.g., role-plays and simulations), authentic projects, and reflective papers as effective tools to foster active learning processes (Bacon et al., 2011; Erskine & Johnson, 2012).

The second strategy is *problem-centred or problem-based learning (PBL)*, which is another kind of action-based learning. In problem-centred learning, students "are given a problem they are expected to solve by exchanging ideas with their peers and acquiring the necessary knowledge that they may initially lack" (Figueiro & Raffluet, 2015, p. 28). This method aims at developing independent thinking as well as collaborative problem-solving capacities (Erskine & Johnson, 2012).

The problem-based learning approach (Du et al., 2013) is seen as interconnection of three different learning approaches:

- a. Social or team organised learning: learning is seen as a social act;
- b. Cognitive learning: learning is centred around problems and is carried out in projects;
- c. Content-based learning: learning is exemplary; it supports the relationship between theory and practice.

Collaborations between different disciplines, as well as between universities and the private and public sectors were also identified in the extant literature as especially relevant for introducing sustainability into the context of business and management studies. Collaboration needs to be learnt, not only as a technique but moreover as an attitude.

Thus, when it comes to empowering business students to be able to develop effective solutions for the achievement of the Sustainable Development Goals, it is not enough to inform and provide knowledge about the issues at stake. Students need to understand that there are no standard solutions to be learnt in the classroom, and they need to be provided with the necessary competencies to find and implement solutions on their own. We aim to develop this understanding among business students with our proposed concept.

For this purpose, we applied the PPS proposed by IAP2 to implement a five-step model for experiential and problem-based learning in a Bachelor Course on Business Ethics and Corporate Social Responsibility.

Because of the interconnectivity and quality of relationships in educational institutions and their interactive settings like classroom lectures, we chose to base our concept on the PPS, as it enables to activate a participatory stakeholder engagement

process in class. The methods and instruments of involving public interest stakeholder groups were replaced by different educational methods and instruments, aiming at enabling participative and interactive learning. The PPS has been object of several studies on participative processes, mainly in the context of public participation and other stakeholder involvement processes (Fox & Murphy, 2012; Inglis, 2007; Longworthy, 2007; Peer & Stoeglehner, 2013; Pellicano, Vesci, Troisi, Cosimato, & Tuccillo, 2014; Shipley & Utz, 2012). We consider the framework highly qualified for a structured approach aimed at raising awareness and transferring knowledge in the context of societal and environmental issues.

As was already explained above, the PPS consists of five steps: Inform, Consult, Involve, Collaborate, and Empower. It is important that the sequence of steps is maintained and none of the steps are skipped or omitted. The goal of the participative learning process is to jointly build awareness, learn from each other and mutually develop possible ways to tackle challenges of sustainable development.

The different stages of the PPS framework have the following objectives:

1. Inform: In this stage, the participants are provided with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or proposed solutions.
2. Consult: Participants contribute through their own experience and knowledge, and give feedback on the previous analyses, proposed alternatives or decisions
3. Involve: During this stage, active participation of the involved stakeholders is required, in order to ensure that public concerns and aspirations are consistently understood and considered.
4. Collaborate: Participants engage collaboratively in the development of alternatives and the identification of the preferred solution.
5. Empower: Participants themselves are in charge of implementing the developed solutions.

Applied to an educational context, this framework permits a direct implementation of both problem-based and an active-learning teaching approaches as it provides participants not only with the information they need, but moreover involves them in a meaningful way in the process of decision making, solution finding or any other agreed upon outcome.

In the following section, we will describe how we applied the framework in our pilot course.

3.1. Objectives and structure of the course

As has been already mentioned, our case study describes the application of the PPS to Bachelor Students, full-time and part-time, in the sixth semester of the undergraduate programme 'Management and Entrepreneurship' at the FH Wien University of Applied Sciences for Management and Communication in the module "Business and Management Ethics: Corporate Social Responsibility".

The learning objectives of the pilot concept, conducted in the spring term 2016, were to enable students to define basic concepts of business ethics and subsequently to identify ethical issues in concrete applied cases. Additionally, they were to be provided with the ability to develop and evaluate possible options in dealing with these ethical issues. Furthermore, students would be enabled to identify and to discuss best practices of corporate social responsibility and sustainable corporate management.

We decided to organise the content of the lectures along the five levels of engagement of the PPS framework as follows – each cohort participated in a total of 18 teaching units, equivalent to 1 ECTS or 25 working hours:

3.1.1. Inform (30% of teaching time)

Students were provided with basic information on the discussed topics (theory, facts and data and the state of research). They were introduced to the topics (Corporate Social Responsibility, Business Ethics, Human Rights, Corporate Crime, etc.) and issues arising from it with the aim of creating a mutual knowledge basis for all attendants. This part of the course was mainly lecture based.

3.1.2. Consult (10% of teaching time)

In this stage, active problem-based learning started. Students' feedback on the topic, e.g. their experiences, additional knowledge, and opinions, were collectively discussed. Different positions and controversial research were debated in groups, then the results of the group discussions were collected and debated in plenary.

3.1.3. Involve (30% of teaching time)

Research teams were put together to investigate good practices in ethical management and of corporate impact on society and environment. They formed teams of max. 6 persons, each group concentrating on different areas of Corporate Responsibility – e.g. responsibility in the supply chain, labour issues, environmental issues, corporate governance, human rights or corporate fraud. Each team had to work on an ethical lapse case based on current articles from the press. They were also asked to do web research on the case, and evaluate it against the fields of responsibility according to the UN Global Compact (UNGC) or ISO 26000.

3.1.4. Collaborate (25% of teaching time)

A role-play using the dilemma simulation game by the UN Global Compact was conducted, to gain insight on the challenges of balanced decision taking of management in real life situations (a detailed description of this interactive game is provided in [Appendix 1](#)). As the game is designed to be performed by a maximum of six individuals, the students' task was to form teams of five. They had to discuss the relevant aspects of every case in terms of economic, social and governance aspects among the team – which in every round takes upon the role of a different stakeholder group – and find a mutual decision in every dilemma case. The game allows discussing real cases of management in ethical dilemma decisions faced by UNGC members, according to the fields of environment, labour rights, human rights and corruption.

3.1.5. Empower (5% of teaching time)

In this last stage, participants have the opportunity to implement what they have learned in the previous stages. In their written exam, students were able to analyse and describe a real-life ethical lapse case, according to international standards of ethical behaviour (UNGC, OECD GL, ISO 26000), including determination of materiality, core issues of responsibility, definition of relevant stakeholders. They had to decide on the most appropriate course of action according to those standards in a determinate case and provide plausible arguments defending their position.

3.2. Evaluating the pilot course

The level of exam grades was a very high one, and the learning objectives according to the syllabus³ were reached by 90% of the students. The reaction of the students to the different activities was thoroughly positive. In the classroom, they participated actively and appreciated the activity. The teacher-centred lecturing in the first level of involvement appeared to be more tiresome to most of them than the other four levels, when interest and activity remained high.

However, we acknowledge that despite the attainment of basic knowledge and awareness in the course, the very narrow timeframe of 18 teaching units/25 working hours given, certainly poses its limits on the obtainment of other sustainability competencies needed in future-oriented management.

Students evaluated the course in two steps. A first online evaluation was conducted in a standardised way at the end of the course by the responsible department. Students' feedback was very positive.

When asked **“What was helpful to ensure learning success?”**, students highlighted the use of different methods such as case discussions, games and group work (*“Examples from practice, games and tasks for the independent learning of the material were very helpful”*). Another question aimed at getting suggestions for the improvement of the course (**What do I need to achieve the learning objectives better?**). In this aspect, some students noticed that they would have appreciated an earlier exposure to the topic (*“In my opinion it would be important to apply this course of study earlier in the course of studies. It was for me the only teaching event that really promotes future-oriented thinking and challenges the traditional ways of corporate management”*).

The feedback provided some interesting insights on students' experience. However, we decided to develop some additional questions in order to get more specific advice regarding the course design. Therefore, we developed an internet-based survey for students in order to assess to what extent this teaching concept managed to achieve the objectives of an experiential, problem-based learning approach, as well as other relevant goals of good teaching.

We decided to adopt the “Course Experience Questionnaire” developed by [Wilson, Lizzio, and Ramsden \(1997\)](#) to assess students' experience. This questionnaire consists of 37 items and includes the following scales:

1. Good Teaching Scale
2. Clear Goals and Standards Scale
3. Generic Skills Scale
4. Appropriate Assessment Scale
5. Appropriate Workload Scale
6. Emphasis on Independence Scale

We pretested the survey to ensure that the questions were clear and understandable, before the actual administration of the survey. We asked our respondents to point out any ambiguous, vague or unfamiliar terms and incorporated their feedback to improve the readability and relevance of the survey instrument ([Podsakoff, MacKenzie, Lee, & Podsakoff, 2003](#)). After the pretest, we decided to shorten the questionnaire to 19 questions which reflected best the declared objectives of the teaching concept we wanted to develop. We added 4 items as proposed by [Marcangelo, Gibbon, and Cage \(2009\)](#) to assess the social aspect of the experience (“Participatory Learning Scale”). At the end of the questionnaire, we added a demographic survey

³ The contents of the course according to the syllabus were: 1) history, terms and definitions and theory of corporate ethics, corporate social responsibility, including the honourable merchant, Smith, Friedman, Porter-Kramer; 2) corporate governance and compliance; 3) international guidelines and standards for corporate sustainability and responsibility management, and implementation; 4) stakeholder theory and concept; 5) CSR communication procedure, instruments and channels of responsible communication, stakeholder dialogue and CSR reporting; 6) Sustainability ratings and indices, CSR certifications; 7) CSR issues: lighthouses, greenwashing, etc.; 8) Management dilemmas, corruption, supply chain, critical industries and business segments.

question (age) and an overall assessment of the course. The resulting questionnaire had 25 items. A 5-point-Likert-Scale was used to assess the individual items.

Students were asked to evaluate the course via an internet-based survey eight weeks after the course had finished. An email invitation and two reminders were sent to all the participants in the course ($n = 163$). We gathered 28 filled questionnaires, which equals a response rate of ca. 21%.

Fig. 1 shows in detail how some individual items within the scales were rated. First of all, the content objectives of the course, namely raising awareness for the relevant topics, identification of ethical lapses, risk prevention and the provision of solutions by ethical or CSR management could be achieved in this pilot course: 60.7% agreed with the statement “As a result of doing this course, I feel more confident about tackling unfamiliar problems”.

In general, the majority of students appreciated the discussion and exchange with their fellow students. More than half of the students attending the course (60.8%) strongly agree or agree with the statement “During the course I profited from sharing my knowledge with fellow students”. Nearly all of them (96.4%) strongly agree or agree with the statement “I now feel capable to discuss topics of business ethics with others and to argue my point of view better than before”, while 72.4% strongly agree or agree with the statement “Dialogue and discussion with my fellow students contributed to the improvement of my viewpoint ...”.

However, and despite positive perceptions regarding interaction and discussion, it does not seem that specific collaborative skills were specifically enhanced, and in fact this was not the actual learning objective of the pilot course. Based on the results of the evaluation, 46.4% neither agree nor disagree, 10.7% disagree and 3.6% strongly disagree with the statement “This course has helped me to develop my ability to work as a team member”. Albeit discussion among the students had taken place and was conducted intensively, students showed very little awareness that this could have a positive learning effect. They seemed to be very focused on the teacher and in fact, they are not used to learning from peers. Future courses therefore should have a stronger focus on fellow students appreciating the sharing of knowledge and the resulting learning effects of class discussion and exchange of experiences.

4. Further development of the teaching concept

As Brundiers et al. (2010) note, “a consensus has developed, that sustainability education should include a variety of capacity-building pathways that engage ‘head, hands, and heart’” (p. 310). Their three-cluster model of key competencies differentiates in strategic and practical knowledge, and in collaborative competencies, as was explained above. We also evaluated our course according to the attainment of these competencies.

The strategic knowledge cluster, including content and methodological knowledge is meant to build competence in analysing and understanding the issues of sustainability as well as the ability of creating future scenarios and visions, assessing values and principles and the development of strategies for a sustainable future. This specific cluster was implemented in our course through the measures focused on distinguishing the role and responsibility of business, its value added to society and its contribution to sustainable development.

The practical knowledge cluster refers to the competencies and skills bridging the gap between knowing and doing and calls for action-oriented, strategic knowledge. Despite the importance of this implication, the learning objectives of our pilot course focused strongly on the theoretical analysis, definition, reflection, and discussion. The given amount of time was very narrow, which is why the integration and implementation of a practical strategic approach to responsible business action for sustainable development remained at a preliminary stage.

Due to the absence of a specific learning objective and to the time constraints, it was not possible to address collaborative competencies properly in our course. Additionally, after evaluating the extended feedback given by the students, it seemed obvious that the applied collaborative learning experience among peers and the cooperation with external stakeholders needs to be enhanced.

The learning objectives of our adapted PPS concept will also be raising awareness and understanding of the problems at stake and additionally, of the role business plays in the emergence, dissemination, perpetuation and alleviation of poverty. We call this learning objective “Recognize yourself and your role as a business actor”.

Students should further learn to develop strategies and programmes, as well as some basic tools to approach and support a process of co-creation and co-implementation. Therefore, the course should lead to the formulation of possible approaches for solutions via collaboration in accordance with the SDG #1 “End poverty in all its forms everywhere” and in special regard to SDG #17 “partnerships for goals”.

According to the United Nations, “eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.” To achieve this goal and in connection to the other 16 goals, all countries and all stakeholders are called upon to act in collaborative partnership for implementation. The SDGs balance the three dimensions of sustainable development: the economic, social and environmental, and are based on “a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.” Therefore, it is necessary to also take SDG #17 into regard, as “the interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realised” (United Nations, 2016b).

As mentioned above, the contribution of real-world learning opportunities to sustainability education has been a subject of research for quite some time (Barron et al., 1998; Blumenfeld et al., 1991; Dale & Newman, 2005). Following Brundiers et al. (2010) real-world learning opportunities can be integrated by a variety of models, including project- and problem-based learning and can align well with key competencies in sustainability. The learning objective is to recognise different interests and engage with the various stakeholders involved on different levels. We will thus propose a real-world learning opportunity in which students interact in a collaborative project with NGOs working with the poor.

The structure of the teaching concept follows again PPS and connects the didactic instruments with the learning objective “recognize yourself and your role”. It considers the role of the organisation in combination with the role of the individual in society and systems, structures and processes, and how a business organisation can contribute to the development of a sustainable society. It focuses on awareness building, reflection and capacity building by cooperative and collaborative processes. The focus is strongly on the “personalization of poverty” to enable social sensitivity and a humanistic view, transforming the general or “macro” perspective of the topic to a specific or “micro” one.

The stages of the new teaching concept are to be implemented as follows:

4.1. Information (10% of teaching time)

In this stage, the teacher provides balanced and objective information to help students understand the SDG topic of poverty alleviation and inclusive business, theory and data on the status quo on problems, alternatives, opportunities and/or solutions in the context of SDG #1. Specific examples and research on how business and management can influence the achievement of this goal will also be addressed.

Didactic instruments: This part is teacher-centred and will take place in a lecture-based setting.

4.2. Consultation (20% of teaching time)

In this part of the course, the teacher obtains feedback and listens to the experiences and opinions of students related to poverty, providing guidance and facilitating students' conversation to bring in their own, current level of knowledge. The teacher collects views and integrates students' input. Discussion takes place in buzz groups and insights are to be taken to a plenary circle (depending on total number of students per class) around questions and statements like:

- Distinguish poverty in western industrialised countries vs. developing/emerging/underdeveloped countries.
- Describe poverty in your country/your city.
- Do you personally know someone considered poor?
- How does business and industry influence poverty?
- How to avoid complicity?
- Who are the stakeholders or affected groups?
- Who are the players that need to be involved in alleviating poverty?

Didactic instruments: Discussions and building of groups representing stakeholders, conduct research on their respective issue and interests, work out and present their positions. It is of utmost importance to step down from the general view of poverty as a social problem to a specific one, where poverty loses its abstract character and gets a personal face. Poverty affects people in different ways according to geography, gender or age. This step is a process of gathering information and taking the views of diverse stakeholder groups into consideration, in order to gain more insights on the issue from different angles. Taking position and defending interests of a specific stakeholder group in discussion can be a first “eye-opener” for privileged students.

4.3. Involvement (30% of teaching time)

In this stage, approaches for co-creation are not only introduced methodologically but also at the same time starting to be applied practically. A field trip, with or without stakeholder involvement, can be conducted. Students are asked to conduct a mindful conversation with a person considered to be “poor”, one by one (field work, according to class size they can also form teams of max. two). They will follow a set of questions to be discussed and developed in the plenary. Some exemplary questions could be:

- What makes you believe this person is poor?
- Does this person describe him/herself as poor? If yes, why so?
- What is his/her “poverty story”? How did he/she get into this situation?
- What would help to find a way out?
- Who could/should help to find a way out?

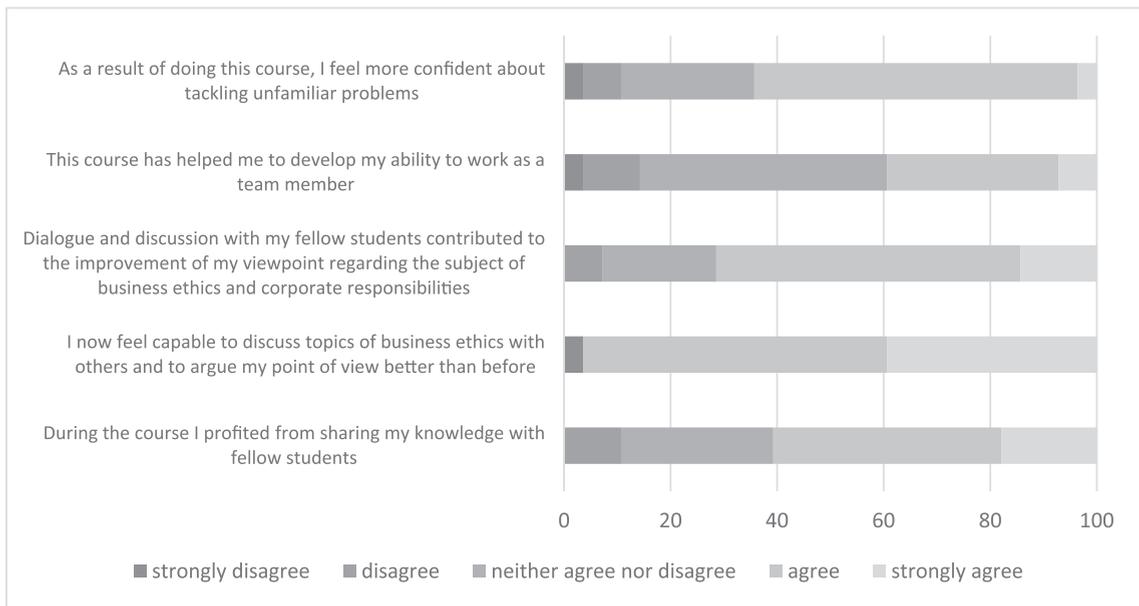


Fig. 1. Participatory learning and Generic Skills Scales – Detailed evaluations, (n = 28).

Students start working with the PPS as a tool to develop their own participative project to address SDG#1, as it is based on “the belief that those who are affected by a decision have a right to be involved in the decision making process [...] thereby promoting “sustainable decisions by recognising and communicating the needs and interests of all participants, including decision makers. [...] seeking out and facilitating “the involvement of those potentially affected by or interested in a decision” (IAP2, 2016). In this way teacher, students and external stakeholders (like NGOs, community or other interest groups' representatives) cooperate to ensure that the students' approach to find a person for their field experience is not only successful from their perspective but also for the involved stakeholders. In a preparatory classroom session students are instructed and sensitised to conduct a respectful conversation. Content will not be provided in this stage, the teacher's part is rather a directive and supporting one (e.g. finding a qualified contact for the interview, guidance of NGOs, shelters, etc).

In this context collaboration with an NGO or an organisation already in the field is utterly important. A field expert's advisory on the design of community involvement and activity is mandatory as students' experience shall never be made at the expense of this community, nor shall it be used to intrude, exploit or raise false hopes. It remains in the responsibility of the organising teacher to secure a certain continuity of the engagement and a long-term commitment.

Each student will have to describe his experience, observations (of himself and of the conversational partner) and findings, and share them with the plenary.

Didactic instruments: Preparation and coaching for field experience, conducting a conversation circling around a set of standardised questions by students, presentation of findings and discussion in the plenary. Conducting the interviews is part of a homework project.

4.4. Collaboration (30% of teaching time)

The teacher's part in this stage is to initiate and supervise collaboration among students and with the external stakeholders involved (NGOs, community representative) in each aspect of developing insight in the issue and its dimensions. The teacher acts as facilitator to develop concrete projects. Students organise in teams and choose a focus either according to region, industry, or specific interest group. Then they cooperatively develop and identify possible solutions to the problems they have encountered. In this stage, they decide and work independently. Their proposed solutions are presented and discussed in front of the other students. The dilemmas and conflicts arising from this discussion should be mitigated by the students themselves.

Didactic instruments: Team learning and collaborative problem solving, building of collaboration clusters, discussion, elaboration and drafting of measures, presentation of steps, actions of different groups (under the aspect of mutual interests in the issue). Group meetings are part of the homework project and take place outside the classroom.

4.5. Empowerment (10% of teaching time)

The groups present their projects, suggestions, recommendations. A 'stakeholder referendum' is organised, in which stakeholder groups are asked to give their opinions, suggestions or recommendations on projects, and vote for the ones they prefer. Students again act in the roles of the different stakeholder groups (businesses, communities, authorities, etc.) and represent the interests and positions of the affected groups. This will assure the understanding of the issue, its challenges and obstacles, as well as whom to involve in order to reach SDG #1 and #17.

The teacher's part in this stage is to listen and evaluate the collaborative solutions, to give feedback on the methods used and their outcomes.

Didactic instruments: Oral presentation, written concepts, 'stakeholder referendum'.

5. Discussion and limitations

Based on thorough literature review on teaching sustainability to business students and on the experience made in a pilot course with undergraduate students, we have proposed a teaching concept by which students will learn through first-hand experience. Through the recreation of a multi-stakeholder dialogue with their fellow students, they will learn the possible solutions to specific forms of poverty. In particular, the course aims at raising awareness and understanding of the problems at stake and of the role business plays in the emergence, dissemination, perpetuation and alleviation of poverty. We call this learning objective "Recognize yourself and your role as a business actor". Through the direct confrontation with poverty, students shift their perspective from a global, general and somehow abstract problem to a specific and personal problem that can affect anybody.

We have outlined the possible contents of a course aimed at undergraduate business students. However, we consider that the success of this teaching concept in achieving its objective depends on some fundamental factors:

- a) **Time budget: Number of teaching units allocated to the course in the overall curriculum** Our pilot course and the proposed course can be implemented within 1 ECTS – 18 teaching units—which we consider is the minimum time possible that you can devote to this topic. Very often the teachers of this course will have to convince directors of the programme of the importance of allocating more time. It is also true that the provided time budget reflects the importance given to the topic by the directors of the study programmes. Depending on the total time allocated, the course can be either focused on the first phases of the PPS – information and consultation – or, in case of a larger time budget, it can be developed to an experimental lab for social innovations and real hands-on projects. In this latter case, the focus would be put in the last two phases, collaboration and empowerment. However, it is important to stress that, in any case, every part of the PPS-process is highly relevant. If possible, none of the steps should be omitted. The first phase, information, can not only be used to transmit facts about poverty but also to create a common understanding of the problem at stake, of the importance of achieving the SDG #1 and to create a common objective of the course, which is to empower future business leaders in the fight against poverty in all its forms.
- b) **Acknowledgement of the importance of learning from peers and of conducting stakeholder dialogues** Our survey, together with our long teaching experience, showed us that most students lack the awareness that they can learn from each other and some have difficulties in accepting or even engaging with the others' positions, especially when they do not correspond with their own. Therefore, promoting openness for dialogue and interaction is a determinate objective of this course.

5.1. Limitations of the study

Although the present study has yielded some interesting indicatory findings, one major limitation of the collected data is the small sample size of the student survey ($n = 28$). Therefore, the presented findings of the study cannot be generalised beyond the study sample. The objective of the study was to explore how our teaching concept influenced the learning experience of a specific group of students. In order to get results that can be generalised, we should extend the survey to a larger and more heterogeneous group of students.

Another limitation regards the scope of our teaching concept. As we have noted earlier, we follow Nahi's notion that "deep co-creation" and "iterative interaction" is necessary to develop real sustainable BOP strategies in collaboration with the affected communities. However, in this course-setting which considers a minimum of 18 teaching units, we will be only able to transmit a fundamental awareness of the necessity of co-creation and some basic interaction tools and rules of engagement that can be applied in the process. We will not be able to develop a holistic process of co-creation with our students, as this would take at least one whole semester, or even longer, of practical fieldwork. Through interviews with vulnerable communities and the development of a pilot concept as a possible solution to some specific issues that students discover in collaboration with specific NGOs, we aim at developing a deep understanding of the necessity and meaning of interaction and collaboration in students of business and management. We acknowledge the fact of this limitation of scope in our concept, however we also acknowledge that our aim cannot be to prepare fieldworkers or social entrepreneurs, but moreover business

leaders who are aware and understand the need of collaborative decision making for the achievement of sustainable development.

5.2. Outlook and future research

The proposed concept needs to be implemented in a pilot class to allow further insights regarding teacher and learners experiences and the effectiveness of the proposed instruments.

6. Conclusion

The aim of our teaching concept was to open undergraduate business students' perceptions to the problems of a real group of persons, the poor and destitute, in order to be able to develop effective strategies to achieve SDG #1: alleviation of poverty.

Two fundamental aims were followed in the conception of our teaching concept. First, to create an active learning process in which students move from being informed about the pressing challenges described by the SDGs, i.e., from a mere passive-learning setting, to developing possible exemplary solutions on their own. For this, a five-level teaching concept – the IAP2's Public Participation Spectrum (PPS) – was proposed as framework within which an experiential problem-based learning approach can be implemented.

Second, this concept aims to provide students with a concrete tool by which they can implement a participatory process in their future professional endeavours. The structure of PPS can be applied to different stakeholder group interactions following diverse objectives.

Through the proposed collaborative and experiential problem-based learning process, students will not only be better informed about the problem at stake, but will get the opportunity to spend some time with disadvantaged and vulnerable groups –e.g. refugees, homeless, etc. – and learn directly how to engage for co-creation. Additionally, it will give them the opportunity to develop business-based solutions together with their fellow students, and to generate real-world ideas to solve the problems they have confronted in their field experience. Depending on the total time allocated, the course can be either focused on the first phases of the PPS – information and consultation – or, in case of a larger time budget, it can be developed to an experimental lab for social innovations and real hands-on projects.

Apart from providing a unique experience for them, we are sure that through this approach, students will understand better that business and the economy can contribute effectively to an inclusive sustainable development. We find this collaborative aspect especially important in the education of business students, as they tend to be formed accordingly to an all-encompassing paradigm in which opportunistic and selfish behaviour is encouraged and seen as norm, and thus the pursuit of a commonly sought good by business and societal actors is more or less excluded. Moreover, sustainable development of society is not a goal that can be achieved by individual players only. Thus, the opportunistic and often individualistic mindset of business students needs to be challenged by more collaborative ones.

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Appendix 1. The UN global compact dilemma game

The board game has been developed for the Ministry of Foreign Affairs, Denmark in 2010 as a tool for companies to strengthen their CSR commitment and implementation efforts. In this course, we use the game to introduce students to various real-life management dilemmas and ask them to solve them accordingly to the ten principles of the UN Global Compact, which have been part of the lecture in Phase 1, Information.

To adapt the setting for the game, eight large tables have to be pushed together and all students (around 35 participants) have to gather around the tables. They get instructions and build six teams consisting of six participants. One team rolls the dice and moves the position on the board accordingly. This defines the section of the dilemma, corresponding with one of the four fields: Human Rights, Environment and Anti-Corruption. On the cards to pick, the teams find scenarios which demonstrate how business professionals are often faced with dilemmas involving CSR and Sustainability issues and the need to balance conflicting stakeholder views. The stakeholder groups represented in the game are consumers, community, employees, NGO, shareholders, while one team takes upon the role of management in dilemma. The teams swap their roles in each round.

The dilemma is read out loud to all groups, and while ‘management’ discusses among their group on how to decide and which of the four given choices to take while evaluating social and environmental business risks against the 10 principles of UN Global Compact, the stakeholder groups each also discuss the possible choices from their perspectives and decide on the one that best suits their interests and needs according to the proposed situation.

Once the ‘management’ group has decided and justified their decision, the stakeholder groups each comment the decision from their own perspective and needs and give feedback to management. Based on this, and the discussions with the various

stakeholder groups, management can revise their decision or keep it. Once the decision is final, the stakeholders evaluate it by rewarding or withdrawing points, or not giving any at all. They also have to give reasons for their decision. This way, the 'management' group is confronted with the various stakeholder perspectives and will have to decide on whether to integrate them in their decision or not, considering the relevance of the stakeholder group and the impact and power each group has. This stimulates reflection in the sense of the course contents and also the balanced solution process.

Playing this game for several rounds takes three to four hours and leads to an overall understanding that due to the complexity of the issue, standardized business solutions are rarely purposeful. Students are stimulated to engage in discussions not only with their team members but also with their peers and stakeholders to come up with mutually agreed upon, balanced solutions and decisions. They experience that critical reflection and holistic thinking as well as active engagement by communication can bring a more realistic perspective.

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