Article

Is Corporate Social Entrepreneurship a (So Far) Missed Opportunity for Higher Education Institutions? Evidence from Germany

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Abstract: (1) Background: Corporate social entrepreneurship (CSE) is a young phenomenon courting recognition that is attracting increasing attention in academia and corporate practice. Nevertheless, it has rarely found its way into the curricula of higher education institutions (HEI), which raises the question of the concept's potential for further development in the realm of academic teaching; (2) Our study is based on a mostly qualitative research design consisting of expert interviews, focus groups, and a low-standardized survey; (3) Results: Corporate social entrepreneurship is seen as having strong potential to enrich education at institutions of higher learning, to establish new forms of teaching, and to bridge the gap between higher education and society; (4) Conclusions: Although our results indicate industry need and student demand for competent corporate social entrepreneurs, German HEIs have not yet integrated CSE-specific education into their curricula. However, the required competences are covered by CSE-related fields of study, which hampers the holistic education of CSE learners. A CSE curriculum needs to cover core CSE concepts as well as key competences, and the engagement of quadruple helix stakeholders requires an adjustable and transversal approach of curriculum development.

1. Introduction: Corporate Social Entrepreneurship

Corporate social entrepreneurship (CSE), although an increasingly and intensively discussed phenomenon in recent years, is a fuzzily defined concept struggling for recognition among academics and business practitioners. This is especially the case when considering its curricular anchoring in higher educational institutions (HEIs), where it competes with comparable concepts that are often no less fuzzy. However, the basic consensus across all attempts at definition is that our society and environment are increasingly calling for innovative, business-oriented solutions to pressing social and environmental problems such as the climate crisis or global inequality [1,2]. Today more than ever, entrepreneurs and companies have a social responsibility not to infringe the rights of third parties with their value creation and, at the same time, to make a proactive contribution to the development of society [3,4]. Although the controversy about the role of corporations in the globalized world is not a new phenomenon, the debate has gained momentum not least due to contributions by Porter and Kramer [5] (p. 77), who postulated that the "next evolution in the capitalism model recognizes new and better ways to develop products, serve markets, and build productive enterprises." It seems that the urgent need for transformation of entire economies and societies favors the preoccupation with the new concept, which is conspicuously often associated with emergent market economies, low-income markets,

and approaches to fighting extreme poverty [6–10]. Moreover, the understanding of CSE continues to be left to a broad spectrum of interpretations and requires a sharpening of its content in order to assert itself in the field of highly established but often also ambiguous terms such as corporate social responsibility and social entrepreneurship.

The starting point for most attempts at definitional localization is, unsurprisingly, the field of entrepreneurship, and only secondarily, literature on corporate responsibility. Austin and Reficco [11] identify entrepreneurship, social entrepreneurship, and corporate entrepreneurship as the foundations and key reference points of the concept. With social entrepreneurship, reference is made to a concept that has been very popular and frequently used in recent years [12–15], but which remains in a pre-paradigmatic state [16]. At the same time, unifying criteria can be developed that characterize social entrepreneurship: innovativeness, proactiveness, risk management, effectual orientation, social mission orientation, and sustainability orientation [17]. The question of how far CSE will develop into an independent sub-discipline in entrepreneurship research is still open today. Beyond entrepreneurship research in the narrow sense, CSE is regularly linked to stakeholder theory and networking [6,18], the base of the pyramid approach [19], and especially corporate social responsibility, which CSE aims to reform or further develop [11,20,21].

While use of the term is increasing, consensual definitions and delineation remain scarce. Among the best-known approaches is the definition of Austin et al. [22] (p. 170), defining CSE as "the process of extending the firm's domain of competence and corresponding opportunity set through innovative leveraging of resources, both within and outside its direct control, aimed at the simultaneous creation of economic and social value." Later, Austin and Reficco expanded this definition to include the key elements "enabling environment", "the corporate social intrapreneur", "corporate purpose: values-based organizations", "value creation and the double return", and "co-generating value". A recent empirical Europe-wide study confirmed the CSE definition by Austin and Reficco through analyzing 75 CSE case studies and researching trends in CSE by running over 400 CSE practices through an horizon scanning mechanism [23] and summarizing the findings into the following CSE concept: "Corporate Social Entrepreneurship (CSE) is 'a way of doing business' so that all staff in any given organisation (public, private or third sector) are fully aware of their role, responsibility and contribution to the sustainable socioeconomic enhancement of their organizations and the communities in which they live and work. The CSE process includes: creating an enabling entrepreneurial environment, fostering corporate social intrapreneurship, amplifying corporate purpose and values as well as building strategic alliances in order to solve economic and social problems and to promote the success of emerging innovative business strategies." [24] CSE is always associated with extensive transformation processes that are to take place within an organization or within the surrounding society. In this way, the definition draws a line in the sand compared with corporate social responsibility. The latter is less dependent on an innovative, entrepreneurial approach and, in case of doubt, can limit itself to the implementation of already established standards of corporate responsibility [25]. Nevertheless, it is precisely a stated goal of CSE to develop a new and more powerful understanding of corporate social responsibility [11]. At the same time, the emphasis on a profit motive, which is certainly in companies' interests, sets it apart from social entrepreneurship, which in turn focuses more on solving a social or ecological problem [25]. CSE can therefore pursue at least a triple benefit [26]: As a transformational innovation approach, it aims to use social or environmental challenges as a catalyst for internal innovation processes and thus possibly also to change the business model itself. As a market development approach, it aims to push existing businesses into new territories and win new customer groups and cooperation partners. As a local development approach, companies are recognized as having a local or global responsibility and are expected to contribute to the further development of communities and societies or to reduce their own negative influence on them.

CSE claims to represent a novel synthesis of organizational value creation, business model development, and societal transformation. In addition, there are unmistakable

efforts to link it to more established concepts such as corporate social responsibility, social entrepreneurship, and stakeholder theory. Accordingly, there are possible approaches for a curricular anchoring of CSE in HEIs. The concept is also particularly attractive for the education of future leaders in business and society because it has a strong personal component and is not closely linked to corporate structures, as is the case with corporate social responsibility. HEIs, with recourse to the concept, thus gain a new approach to producing a modern, transformational type of manager and entrepreneur. Accordingly, Hemingway [27] (p. 244) defines the corporate social entrepreneur as a new type of agent "who may identify opportunities for and/or champion socially responsible activity within the corporation, regardless of an organizational culture that is perceived to be pre-disposed towards CSR." Hemingway distinguishes CSE from the business entrepreneur, the intrapreneur, the policy entrepreneur, and the public or social entrepreneur, but leaves open the extent to which a boundary can be drawn with the social intrapreneur. More recent studies [28], however, also strive to draw a distinction here, highlighting, for example, that a CSE is driven more by corporate values and aims to implement corporate responsibility, while a social intrapreneur is driven more by individual, mostly post-material values. Therefore, while social intrapreneurship is often associated with a grassroots movement in the organization that is not very organized, CSE exhibits a higher degree of structuring, centralization, and top-level involvement. Austin and Reficco [11] do not speak of the corporate social entrepreneur, but refer to the corporate social intrapreneur, whom they largely equate with the change agent. These agents catalyze change, while managers perpetuate it [29]. The interplay between intrapreneurs and managers becomes a defining process: "In CSE, on the other hand, both roles coexist permanently; corporations need to be entrepreneurial in order to innovate and go beyond their traditional managerial approaches. This means ultimately transforming the way the company is managed. The key vehicles for moving the company in this direction are individuals within the enterprise who are focused on fostering and bringing about the internal organizational transformation and innovation that moves the organization to a more advanced state of CSR" [11] (p. 3). What all approaches have in common is that CSE should be accompanied by a qualitatively new form detailing how innovation and transformation processes are to be initiated and carried out in and by the company. Overall, the concept of the corporate social entrepreneur appears to be innovative and resilient enough to be associated with downright euphoric hopes for management education: "Corporate Social Entrepreneurship is an incredibly interesting process that will greatly contribute to our collective quest for superior organizational performance and societal betterment. And because of all this, we believe it is also a sifting process for those who truly have what it takes to bring us there; or, in other words, CSE can be seen as an incubator for tomorrow's leaders" [30] (p. 1114).

Although this means that CSE offers substantial opportunities for both scientific research and management education at HEIs, the concept has hardly found its way into their curricula [24]. This paper presents a study on the status of CSE in German higher educational institutions and contributes to the further development of the concept, for example, in the context of entrepreneurship education. Specifically, it aims to answer the following research questions: (1) What diffusion has CSE found so far in the German higher education landscape? (2) What role does the ecosystem of HEIs play in the diffusion of CSE? (3) Which impulses can be set for a CSE curriculum at HEIs and the competencies to be taught?

Our contribution is part of the EMBRACE project and focuses on German HEIs. The project, launched in 2020, is funded by Erasmus+ under the Knowledge Alliance Program and the project consortium includes a total of ten European partners from different sectors (universities, institutes, NGOs, private companies) and various countries (Ireland, Lithuania, Portugal, Spain, Hungary, Romania, Germany, Greece, and the Netherlands), which contribute to the success of the project through their complementary competences. The objective of the EMBRACE project is to promote corporate social entrepreneurship in higher education programs and to improve the skills, employability, and mindset of

students, contributing to the creation of new business opportunities for corporate social change and the promotion of collaboration between companies.

2. Materials and Methods

One of the paradoxes of entrepreneurship research is that in the past, emerging phenomena and fields of research were mostly investigated quantitatively, although a qualitative approach would have been methodologically more suitable [31]. Also, qualitative approaches are very well established, especially in the educational context, and have a number of advantages when it comes to exploring and penetrating complex teaching and learning situations [32–36].

For the field of CSE, which is still very young, little known, and unclearly delimited in Germany in particular, we have chosen a multi-stage, predominantly qualitative approach, which includes semi-structured expert interviews and two focus groups as central elements. Our research design is complemented by a more standardized survey of company experts and is enhanced by desk research to gain an overview of CSE in the German higher education landscape.

2.1. Expert Interviews

The interviews were conducted in the tradition of problem-based interviews [37,38] and were based on an interview guide with 15 core questions that have up to 13 sub-questions covering CSE and CSE-related courses, demand and need for CSE courses of different stakeholders, and the external partnerships of curriculum development and its origination. Although we aimed for a majority of academic CSE experts or experts in CSE-related fields, who were identified according to their organizations' and their own expertise in the field of sustainability and/or entrepreneurship, we also wanted to include CSE experts from industry in order to capture their perspective on CSE education. Thus, allowing theoretically generated prior knowledge to be brought into the interview situation, but at the same time being open enough to ensure foreign understanding. The evaluation of the interview material was based on qualitative content analysis [39].

As outlined in the desk research, Germany has several HEIs that offer programs, modules, or seminars in CSE-related issues (e.g., corporate social responsibility, sustainability, social innovation, social entrepreneurship). To acquire an overview of how CSE is perceived and taught in German institutions, we conducted seven interviews with staff from: three universities, three universities of applied sciences, and one non-HEI program manager (see Table 1).

Table 1. Interview partners of the expert interviews (source: own research).

Person ID	Academic Position	Experience	Organization	Expertise Field
IP1	Program Manager	More than 10 Years	University	Strategic Management Sustainability
IP2	Program Manager	More than 10 Years	University	Business Ethics Social Entrepreneurship
IP3	Program Manager	More than 5 Years	University of Applied Sciences	Entrepreneurship Sustainability
IP4	Program Manager	More than 10 Years	University of Applied Sciences	Management Sciences Sustainability
IP5	Expert in Educational Training	More than 10 Years	University	Corporate Social Entrepreneurship
IP6	Expert in Educational Training	More than 10 Years	University of Applied Sciences	Entrepreneurship Education
IP7	Promotor of Social Intrapreneurship	More than 10 Years	Private Organization	Intrapreneurship

Although we could identify several potential interviewees that covered related topics, it was difficult to find experts in CSE explicitly, as the term hardly exists in the German academic community—many experts in related fields did not consider themselves experts in "CSE". The current COVID-19 situation, the related closures of universities, and the sudden induction of e-learning, for example, made it difficult to engage such experts and arrange interviews.

2.2. Focus Groups

We conducted two focus groups in the middle of June 2020 to share, discuss and enrich our findings from the interviews. Focus groups [40] are a proven and well-established methodology in entrepreneurship research [41–44]. Despite the recommended minimum of six participants per focus group, our study involved fewer expert participants [45]. In contrast to common concepts of focus groups, our design was based on mini focus groups, which enable particularly intensive and in-depth discussions with carefully selected experts [46,47].

In each of the focus groups, three external experts participated (see Table 2). We had one short-notice candidate drop out for the first focus group. Although a sufficient number of potential candidates could be identified [46], there were two main difficulties in having them sign up to the focus groups: first, as "Corporate Social Entrepreneurship" is hardly used in German HEIs, it was difficult to find candidates with sufficient experience that were able or willing to talk about a concept that they were not directly familiar with; second, those with a plethora of experience were often too busy to attend—with the pandemic situation, including delivering digital teaching programs, putting even more pressure on time.

Table 2. Interview partners of the focus groups (source: own research).

Person ID	Academic Position	Experience	Organization	Expertise Field
		Focus Group 1		
IP8	Program Manager	More than 10 Years	University	Corporate Governance
IP9	Expert in Educational Training	More than 10 Years	University	Social Entrepreneurship Sustainability
IP10	Expert in Educational Training	More than 10 Years	University of Applied Sciences	Entrepreneurship Corporate Social Responsibility
		Focus Group 2		
IP11	Program Manager	More than 5 Years	University of Applied Sciences	Corporate Social Responsibility NGO Management
IP12	Program Manager	More than 10 Years	University	Business Ethics Social Entrepreneurship
IP13	Promotor of Social Intrapreneurship	More than 10 Years	Private Organization	Intrapreneurship

In the end, we held two discussion groups with two managers of programs related to CSE in HEIs, two experts in education/training of CSE related fields, one expert on corporate social responsibility processes and one expert on promoting social intrapreneurship. The participants came from five different HEIs across Germany.

2.3. Survey

The methodology of the survey was developed in an international cooperation by the EMBRACE team and targeted corporate entrepreneurs. The objective of the questionnaire was to obtain data about the process of promoting CSE inside the companies (public and

private sector organizations) and to elaborate on the indicators of benchmarking, bearing in mind the aim of obtaining better knowledge about the needs and gaps of the CSE environment. The survey was divided into four groups of questions and the variables were captured through open questions, selection categories, or a five-point Likert scale. Given the novelty of the research question and the low diffusion of the concept in entrepreneurship research, the questionnaire had a strongly exploratory character:

Group A: Practices and Processes of Corporate Social Entrepreneurship in the organization: This group of questions was the most extensive part of the survey, covering seven questions and five sub-questions on the different CSE practices that are integrated into the organization. It tried to capture a comprehensive view of the companies' sustainability efforts and identify the four key elements of CSE. The first question sought to discover where the integration of social values takes place in the organization, if at all (multiple choice, e.g., mission, vision and values, choice of suppliers, etc.). A Likert scale (strongly present/involved to not at all present/involved) question covered to what extent social responsibility values are involved in different business activities (e.g., recruiting, performance assessment, etc.). The third question queried the frequency (always, very often, sometimes, rarely, never) of different practices (e.g., workers' suggestions are introduced in the organizational processes, communication with external stakeholders considering organization's social interests and concerns (to name only two out of the ten prompted practices)). The next variable was the typology of non-financial reporting, if it exists in the organization. A selection of eight types of non-financial reporting (e.g., sustainability report, environmental report, etc.). The following three questions focused on the application of the EMBRACE CSE concept. After the definition was given to the respondents, they had to state if a structured implementation of activities, assessment and monitoring, social auditing, and internal promotion of CSE practices exist (Yes/No). The following question concentrated on producers and beneficiaries of the CSE practices. Thirteen categories plus an open answer ("Other") were given as a choice (e.g., clients, interest groups, media). The respondents had to indicate which category was a main actor involved in social responsibility practices in the preceding three years. After that, the respondents had to provide "one example of a CSE practice/initiative that is about the pursuit of new opportunities by combining the need, willingness, and desire to create joint business, economic and social value". The name and the short description were put in an open question, while the last sub-question was about the actors involved and prompted the same 13 categories, as in one of the previous questions.

Group B: Corporate social entrepreneurship training/education programmes.

Group C: Characterization of the organization/enterprise: Six questions were presented in this part in order to provide background information of the respondent's organization. The question on the name of the organization was optional. Then, the economic sector of activity was asked, followed by an open question asking for the year of foundation, number of employees categorized according to the European Union's definition of micro, small, medium-sized, and large companies, and the typology of the organization/enterprise (e.g., private, public, non-profit, or a mixed typology). The last question covered the legal form of the organization (e.g., sole proprietorship, partnership, or limited liability company, etc.).

Group D: Brief characterization of the respondent: This part consisted of four questions that determined the respondent-related variables of age, gender, education level, and scientific area through a selection of given choices.

While the bulk of the survey questions were about CSE practices and processes in Group A, we only used the following block of questions: "Group B—CSE training/education programme", which indicated the potential role of education and training institutions in CSE:

B8. In your organisation . . .

○　　there is a need to develop education courses/module/programmes to deliver joint business and social value through innovative processes. (strongly agree, agree, neutral, disagree, strongly disagree).

○　　there will be a demand for aforementioned courses/module/programmes. (strongly agree, agree, neutral, disagree, strongly disagree).

　　B9. Where will the highest demand for CSE training/education be? (Select X)

a.　　Workers in general
b.　　Human Resources department
c.　　Financial department
d.　　Executive department
e.　　Legal department
f.　　Logistics department
g.　　Commercial & Marketing department
h.　　Procurement department
i.　　Entrepreneurs/Business owners/Enterprise administration
j.　　Other

　　B10. What skills do you consider important for a graduate student to have in order to promote CSE in the organisations they will work for? Please identify just 2 main skills (Open question).

　　B11 Considering the following constraints, in your organization . . .

○　　there is a lack of human resource practitioners qualified in CSE. (strongly agree, agree, neutral, disagree, strongly disagree)

○　　the enterprise administration is not sensitive/aware of the importance of the CSE values. (strongly agree, agree, neutral, disagree, strongly disagree)

　　B11.1 Are there other constraints you are aware of? (open question)

　　First, the questionnaire was sent out to over 10,000 professionals either working in or interested in CSR in the DACH area via professional networks such as XING, the German version of LinkedIn, and to the general news channels of XING and LinkedIn—starting on 25 August 2020, and again in mid-September and early October. This method was chosen as a quantitative measurement. It was confirmed that at least 370 people opened the link through both professional social media channels but we assume that none of them answered the questionnaire, as the first responses were linked to our direct phone calls later in the process. This suggests to us a very high drop-out rate, which fits to the later feedback we received from companies that we approached directly.

　　As a reaction, we turned to a more direct and personal approach. A contact database containing a total of 196 companies based on official CSR rankings, personal relations, and sustainability efforts was established. By doing so, it was ensured that only those companies with well-established practices of social and/or ecological innovation were approached. In the next step, these companies were contacted in a more personal manner via e-mail, XING, or LinkedIn contacts. Again, the response rate turned out rather low (2–3 responses).

　　This is why we turned to contacting the companies directly, via telephone. This approach proved to be the most effective. However, even if we could get through to an appropriate contact person, it turned out that many were struggling to fill in the questionnaire and dropped out. "We do not have CSE practices and do not think we are able to answer your questions", was answered by an energy company, which was one of the most common reasons for not answering the questionnaire. The other two reasons that were brought forward for not answering the questionnaire were problems dealing with the bulky and academic language and a currently heavy workload reinforced by the COVID-19 pandemic. In total, 18 responses were achieved, only due to a high time investment.

3. Results

3.1. CSE and Its Diffusion in German Higher Education Institutions

We begin to discuss our results by scrutinizing the transferability of the above-outlined scientific discussions evolving around the CSE concept to the German academic community by analyzing its current diffusion in German HEIs. While there is a growing body of internationally published scientific sources on CSE, this trend can only be observed to a very limited extent in the German-speaking academic community [48]. The overall very limited amount of published research specific to CSE seems to suggest that the concept is currently not known or that, at least, the term is not actively used.

Therefore, it was of particular interest for the EMBRACE project to identify study programs which provide CSE-relevant content. For this purpose, intensive desk research analyzing study and job portals for relevant keywords was conducted in March 2020. Based on in-depth analysis of both bachelor and master programs according to their module titles and descriptions, a total of 69 study programs at 53 universities could be identified as incorporating CSE-relevant contents. Relevant profiles included (not hierarchically ordered):

- Social & Sustainability Entrepreneurship
- Corporate Social Responsibility
- Innovation & Sustainability Management
- Business Ethics

The term CSE, however, did not appear in any study program. Due to the constant change of curricular structures, the undertaken desk research can by no means be considered to be representative. Yet, on the basis of the aforementioned figures, some basic statements can be made regarding the diffusion of CSE as an academic concept in the German higher education landscape. For example, in the 2019/2020 winter semester, a total of 424 higher education institutions were accredited in Germany [49]. Conversely, this means that the identified 53 universities with CSE-relevant study content account for a share of around 16.5% of the total of 320 HEIs.

Additionally, asking the question "How would you describe the current involvement of this [the CSE] concept in German HEI landscape?", all focus group participants claimed that there is no explicit use of the CSE concept in German HEIs, although "some universities are focusing on integrating concepts of sustainability and economics" (IP8) and "sustainable entrepreneurship is gaining importance in German HEIs" (IP9). Taken together, these findings seem to indicate that although CSE-related content is gaining momentum in higher education, the concept of CSE as a whole is not yet integrated into any curricular structures.

In order to further analyze this assumption, a total of seven interview partners and six focus group participants with substantial expertise in CSE-related areas of research were asked about their understanding of CSE. The answers revealed that the term is not commonly used within their academic community. Only one IP stated that his institutions' research and lecture activities had been referring to CSE explicitly: "I am responsible for a lecture on business ethics in theory and practice. This means that the topic of sustainable business model development, or Corporate Social Entrepreneurship, is also relevant." (IP5)

The other experts stated that they have never heard of the concept at all or claimed that it is not being used in their respective area of research. Those IPs who were unaware of the term CSE were either confident in deducing its meaning from the words it contains: "corporate", "social", and "entrepreneurship": 'I am not familiar with the term in this form. However, I know every component of this word.' (IP7) or interpreted the CSE concept through the concepts of "corporate social responsibility" (CSR) and "social entrepreneurship" (SE): "For me it is about applying the concept of social entrepreneurship to existing organizations and their CSR approach" (IP10). In accordance with this statement, further discussion on the differentiation of CSE from existing concepts such as SE and CSR revealed that most experts were able to make clear distinctions:

"For me, CSE is sustainability-oriented entrepreneurship from within existing companies. (. . .) I have just indicated that in distinction to this, corporate social responsibility describes corporate activities oriented towards a common good based on the company's financial resources. (. . .) And finally, the distinction from social entrepreneurship: for me, this is not tied activities from an existing company at all. Rather, it's a company that has completely subordinated its economic activities to the common good, be it social or ecological." (IP2).

Additionally, one expert raised the question at the beginning of the second focus group: "Is there a need for a new word?" (IP12), alluding to the expert's perception that there was nothing new to the presented EMBRACE CSE definition, apart from the procedural character that was not covered by the CSR definition. This perception, however, was not shared by the other participating experts, arguing that "CSE is an evolution of CSR—rather than a part of it, as it embeds the sustainable mind-set in all levels of hierarchy" (IP11) or "CSE stresses the bottom-up approach, which is more powerful for a sustainable transformation." (IP13).

3.2. Demand and Need for CSE Education

At first glance, the aforementioned findings may indeed be interpreted as a missed chance to integrate the concept of CSE into German HEIs research and lecture activities. However, we argue that CSE nonetheless holds the potential "(. . .) to develop more advanced and powerful forms of corporate social responsibility (CSR)" [11] (p. 1) and thus stimulate corporate sustainability as a whole.

The subsequent reflection on the research results relating to the demand and need for CSE education is carried out in a two-step process, with special attention paid to the role of the HEI-ecosystem and options for integrating it into a new CSE curriculum. Our argumentation is built upon the assumption that innovative education is the key to providing a new generation of change agents with both entrepreneurial and sustainability competences [50–52], which are needed to act as corporate social entrepreneurs.

3.2.1. The Role of the HEI-Ecosystem: Academic Experts Perspective

Despite the fact that "CSE can be seen as an incubator for tomorrow's leaders" [28], there is still no clarity on how to achieve this by means of education. Henceforth, the EMBRACE project wishes to "(. . .) assess the current state of the delivery of knowledge pertaining to CSE in HEIs [and] define methodologies that could improve the existing training and create transversal synergies in the learning process (. . .)" [24] (p. 9).

In order to achieve this, our research design focuses on one aspect specifically: the interaction of HEIs with their socio-economic ecosystem. In a knowledge economy, the cooperation and interaction of industry, government, the public, and higher education, i.e., within the quadruple helix, is an important factor for innovation and regional development [53,54]. Moreover, there is a growing consensus that universities should assume a third mission of social and economic synthesis with their regional environment in addition to their traditional competences of research and education [55–58]. Hence, the conducted research aimed (among other things) at exploring whether the same can be assumed for the current state of knowledge and competence transfer with respect to enabling young corporate social entrepreneurs.

Naturally, one would expect this development to have positive effects by broadening the range of didactics by incorporating new forms of interdisciplinary and experiential, problem-based learning [50,59,60]. In the course of the expert interviews and focus groups, however, most of the experts could not identify an active interest on the part of industry, public bodies, or non-governmental organizations in terms of establishing or co-creating CSE-related study content:

"Of course, we are in contact with our corporate environment. (. . .) But I couldn't say with a clear conscience that companies have approached us and asked us to do more entrepreneurship in our study programs. If you ask them [the companies], of course they say that they need people who think like that (. . .)." (IP6). Another expert concurs:

"It's very selective. I mean, there are, of course, companies that we are on a friendly basis with and that also work together with our institution. They think that we are doing a good job, too. But it is not like we have strategic partnership with them." (IP5).

Rather, HEIs seem to take the initiative in integrating their economic ecosystem into the creation of new study content. One interviewee revealed that his institution intends to set up a new master program focusing on different aspects of SE. What is special about this is the fact that, apparently, social entrepreneurs are actively stimulating the elaboration of study content:

"Business plays a role in the development [of the degree program] because various external opinions from employees and entrepreneurs were sought in the development process of the master's degree program. Through this, we got feedback on the development. And in the future, we also want to set up a kind of advisory board that consists primarily of social entrepreneurs. They should then support the students' idea development processes." (IP2).

Nevertheless, all interviewed academic experts agreed that there is a high demand among students and young professionals for such an educational program and expressed that it would hold the potential to enrich higher education:

"Definitely. (. . .) I think that the young people have quite interesting ideas and are much closer to the essence of it (. . .). I think it is important to give them new impulses and perspectives." (IP5).

"Basically, it's very positive, because people want to get involved. Some figure that out a little sooner and others a little later. In the end, however, people want to identify with what they are doing." (IP6).

"Yes sure, when it comes to CSR, we talk a lot about what a supply chain might or might not look like. And CSE could help us transform that in the end." (IP7).

Continuing onwards from this point of discussion, the interviewees were asked to briefly describe how they would utilize their respective expertise to implement an educational offer aimed at teaching CSE at HEIs:

"It would be very nice and desirable. (. . .) It would be a lot easier if people came from the university who conveyed this idea of taking employees along and teaching social responsibility to them." (IP6).

"I don't think it would be bad at all if educational offers were always made on the basis of practical examples, clearly. Theory is important. But case studies simply make everything more tangible and experiential for the students in the end. I would always offer such seminars in a very application-oriented way, i.e., in the form of workshops, group work, case studies. (. . .) Interactive and application-oriented." (IP5).

Asking the focus group participants "which aspects (content, organization) should receive special attention when implementing a CSE module", the core messages can be summarized as follows:

- Taking account of theoretical and practical training
- Experience-based learning is necessary
- Necessity of a stronger cooperation between HEIs and companies in order to enhance experience-based learning
- The topic appears to be taking the initiative to experiment new teaching methods

To conclude, the academic experts revealed that the intrinsic motivation of students to make an impact far outweighs the influence of entrepreneurs and other entities in stimulating the topic of innovation within their lectures: "It's embraced due to the students' intrinsic motivation." (IP5). Consequently, most interviewed experts expressed the wish for a stronger collaboration between HEIs and their ecosystem, with the goal of enforcing means of experience-based learning. (cf.IP1, IP2, IP3, IP4, IP5, IP7)

3.2.2. The Role of the HEI-Ecosystem: Private Sector Perspective

The need for CSE education is also echoed by the findings of the online survey of public and private sector organizations. Although the questionnaire's main aim was to

obtain a reliable data pool regarding the current implementation of CSE-relevant corporate practices. the section on CSE training and education also reveals valuable insights to our research question. Despite having a relatively low response rate (*n* = 18), the survey adds more in-depth views on the scope of industry demand for CSE qualified employees and what is needed from a potential CSE education or training program: The survey only collected responses of employees whose represented organizations had included social values (including ecological and ethical values) in their strategy, mission and vision and who all reported to have more than 10 years of work experience and of which 90 per cent held a higher education degree in different fields. Answering the questionnaire required in-depth knowledge in the structure, leadership, and sustainability of the represented organization. Hence, the survey is heavily biased towards those organizations who believe that they are using innovative, entrepreneurial practices to improve their societal impact. Although this was beneficial for analyzing CSE and related educational and training needs, it does not give a representative view of German organizations and thus does not allow for any quantitative analysis.

To find out to what extent CSE practices are present within organizations, survey participants were asked to determine the frequency with which certain activities take place based on a scale (never, rarely, sometimes, very often, always/permanently). It was particularly interesting that the involvement of employees as well as external stakeholders in corporate processes was rated as highly pronounced. More than three-quarters of respondents claimed that "communication with external interest groups (consumer groups, unions, media, local organizations, environmental groups, general public)" in consideration of the social interests and concerns of the respective organization taking place very often or always. When asked "what type of partnerships are made when implementing CSE practices", 13 out of 18 respondents named external interest groups, in which higher education institutions were listed eight times. Consequently, all actors within the quadruple helix seem to play an important role when developing corporate social entrepreneurship processes.

The creation of incentives for employees to voluntarily assume and pursue social responsibility also appears to be practiced frequently, which hints at an involvement of intrapreneurship practices

Interestingly, the vast majority of corporate entrepreneurs who took part in the survey claimed that there is a demand and need for CSE training or education (roughly 80 and 75 per cent, respectively) (see Figure 1 and question B8).

At the same time, the respondents denied that there was a lack of awareness of the importance of CSE-related issues in the leadership of the organizations (80 per cent), and also denied a lack of staff who are qualified for CSE (69 per cent).

This industry demand for CSE skilled workers is also mirrored in the skills that the respondents would like to see in graduates and young professionals (see question B10), which in their own words they described as:

- "Change mentality, enthusiasm"
- "Social interest as well as interest in making companies successful and helping to shape them"
- "Orientation towards people; social, emotional and economic competence"
- "Social AND economic competence"
- "Empathy, networking skills"
- "Strong communication skills, openness"
- "Empathy, technical competence, process knowledge, facilitation"
- "Practical experience through internships, structured thinking"
- "Holistic understanding of sustainability/lateral thinking"
- "Human maturity, communication skills"
- "Personal responsibility, goal-oriented"
- "Being able to think outside the box + expertise"
- "Social skills, common sense"

- "Social skills and communication skills"
- "Interest in social engagement, creativity"
- "Conviction coupled with a strong sense of reality (choose your battles)"
- "Ability to translate knowledge into practical application"
- "Identification with social and ecological concerns also in private life"

This list is complemented by the responses of the two private sector experts (IP7, IP13), who are particularly engaged in the sustainable transformation of organizations, claiming that an independent working style as well as knowledge of business processes are the most important competences. These data suggest that next to professional, entrepreneurial, and sustainability skills, key competences and basic skills are crucial when developing CSE training or education,
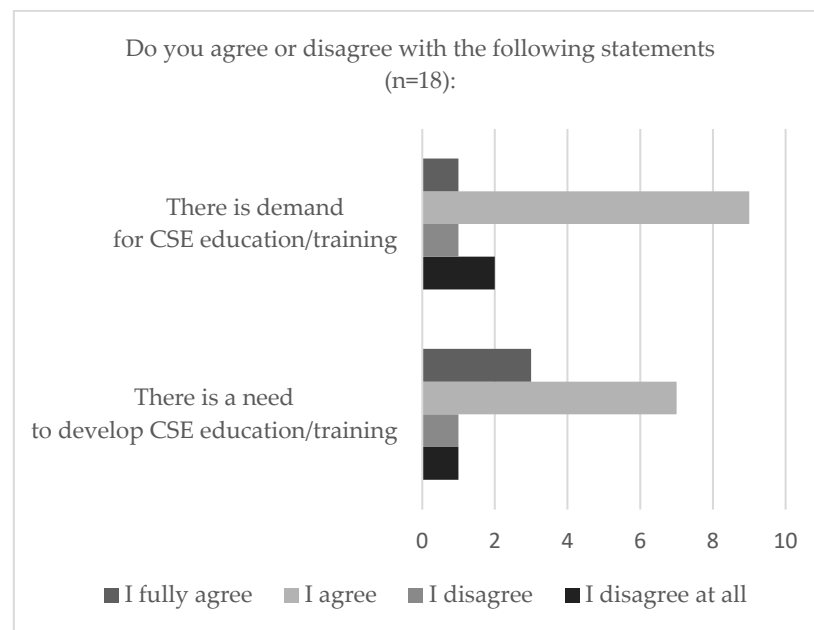

Figure 1. Demand and need for CSE training/education (source: own research).

Both private sector experts are already active in developing seminars in partnership with HEIs and stressed: "I would like to emphasize once again that you have to exhaust the pool of didactic methods. You have to find forms of teaching and learning that also involve partners from practice." (IP7).

As a whole, our findings from the private sector perspective also show that there is a need for collaborative teaching of CSE, which has to comprise entrepreneurial as well as sustainability and key competences, and clearly depicts the need to take into account the different actors of the quadruple helix.

4. Discussion and Limitations
4.1. Discussion

Examination of our research results shows that education plays a key role in maximizing the potential of corporate social entrepreneurs as new types of change agents of all organizational activities. While the analysis indicates that CSE is hardly on the agenda of German HEIs, our data indicates that there is demand for higher education of corporate social entrepreneurs. Notably, our findings indicate that transferring knowledge within the quadruple helix and engaging all sectors of the ecosystem are at the core of enabling corporate social entrepreneurship and its education.

In order to ensure sustainability, the previous findings need to be integrated into a new curriculum that is tailored specifically to educating future corporate social entrepreneurs. Consequently, EMBRACE aims at defining a European Curriculum on CSE, bringing together

all required forms of competence, knowledge, and training to start and promote successful social corporate entrepreneurship practices. This ties in with the importance of entrepreneurship education at HEIs, which has already been highlighted several times [61–64].

Overall, there is a clear need for a collaborative curriculum on CSE in Germany demonstrated in our findings, which enforces the co-creation of knowledge between HEIs and their ecosystem. In our opinion, a necessary condition for success is the active exchange of knowledge and experience between HEIs within the quadruple helix. The development of the EMBRACEedulab may well represent a first milestone in this regard. The EMBRACEedulab will be designed as an interdisciplinary online platform that is holistically dedicated to the principles of CSE. It will imply collaborative pedagogical approaches, which enhance both the educational quality of CSE programs offered by HEIs and facilitate the co-creation of knowledge by entrepreneurs and other actors [65].

The EMBRACE CSE curriculum, which is currently being developed, addresses these needs. The CSE curriculum design follows the overall framework and VUCA approach (volatility, uncertainty, complexity, and ambiguity) of the Curriculum 4.0 guideline [66], extended by the Hanze UAS model for curriculum development [67] and the High Impact Learning that Lasts (HILL) model [68]. The curriculum will depict a clear profile and competence framework and provide means to enable different actors to co-design, co-develop, and co-implement education and training on CSE through the EMBRACE model for CSE curriculum development. This, in turn, will not only help to facilitate future collaborations between companies and HEIs to promote new entrepreneurial activities, but will also take into account flexible learning requirements through transversal learning pathways with core and elective modules.

Dedicated CSE profiles that build on varying prior knowledge of the learner will also support this intradisciplinary and transversal approach. Further, as our research suggests, the competences of a corporate social entrepreneur are specific not only to CSE, but also employ more general personal and professional competences.

Most importantly, a curriculum that aspires to be of European scope must incorporate already existing competence frameworks relevant for CSE. Of course, parallels must be drawn to the EntreComp, the entrepreneurship competence framework [69] with entrepreneurship as one of the European key competences [70], in order to enable entrepreneurial thinking and acting in learners. According to EntreComp, entrepreneurship competence is both an individual and collective capacity which requires creative, theoretical, and practical skills to the same extent (see Table 3).

Table 3. Entrepreneurship Competence Framework (source: [69] (p. 6)).

Ideas and opportunities	Spotting opportunities
	Creativity
	Vision
	Valuing ideas
	Ethical and sustainable thinking
Resources	Self-awareness
	Motivation and perseverance
	Mobilizing resources
	Financial and economic literacy
	Mobilizing others
Into action	Taking the initiative
	Planning and management
	Coping with ambiguity, uncertainty and risk
	Working with others
	Learning through experience

In addition, corporate social entrepreneurs need to be able to strive toward the UN sustainability goals (SDGs) [71] and a CSE curriculum must also pay attention to competences on sustainable development. In this regard, the UNESCO presents "key competencies for

sustainability" that allow citizens "to engage constructively and responsibly with today's world" [72] (p. 10) (see Table 4).

Table 4. Key competencies for sustainability (source: [72] (p. 10)).

Systems thinking competency:	the abilities to recognize and understand relationships; to analyse complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.
Anticipatory competency:	the abilities to understand and evaluate multiple futures—possible, probable and desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.
Normative competency:	the abilities to understand and reflect on the norms and values that underlie one's actions; and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.
Strategic competency:	the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.
Collaboration competency:	the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.
Critical thinking competency:	the ability to question norms, practices and opinions; to reflect on own one's values, perceptions and actions; and to take a position in the sustainability discourse.
Self-awareness competency:	the ability to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.
Integrated problem-solving competency:	the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above-mentioned competences.

Further research is needed to decisively address the competences for corporate social entrepreneurs. Compared to the already differentiated research on social or sustainability entrepreneurship [73–76] and the scant research on corporate entrepreneurship [77,78] and corporate intrapreneurship [79], few competency frameworks for corporate social entrepreneurs are available so far.

Only when integrating these aforementioned elements will the CSE curriculum meet the needs depicted by our research results.

4.2. Limitations

Regarding our methodology and results, there are a couple of limitations that we encountered in the data collection process. The response rate of the online survey and the number of participants of the focus groups and interviews were relatively low. Finding experts for interviews and participants for focus group was difficult. Many potential participants, who work on the periphery of this topic, did not self-identify as CSE experts, and shied away from participating. Although the two mini focus groups allowed us to obtain in-depth insights into the concept and its potential role in HEI education, conducting regular focus groups could have been beneficial for a balanced view on different perspectives.

With respect to the online survey, the implementation of quantitative methods can be improved in future research on CSE in higher education. The survey was not meant to capture quantitative indicators of how many organizations use CSE practices. Hence, the survey is heavily biased towards those organizations that are already using innovative practices to improve their societal impact. Due to the lack of understanding of this emerging field, the survey should have chosen a different approach, to allow for quantitative analysis. One suggestion could be to invite a representative number of companies to assess the diffusion and scope of the CSE concept, rather than pre-selecting those with a known track

record of sustainable activities. At the same time, even though only pre-selected companies were approached, the corporate managers still had difficulties answering the questions and often refrained from completing the survey. To overcome this obstacle, a future survey could use a more low-threshold language and questions on the details of CSE practices could be omitted.

In general, we want to emphasize that the data presented here is from German institutions only, despite the fact that the methodology of the data collection was developed internationally in the EMBRACE project. The European results are presented separately as project deliverables, available on the EMBRACE homepage [80]. However, these findings are presented in a highly condensed manner so that national details of the qualitative research could not be included. This means many national facets were not taken into account so that a German view was worthwhile. We acknowledge and appreciate that other countries might have significantly different results.

5. Conclusions and Future Research

Even though our research is limited to the German university landscape and its other mentioned limitations, several conclusions can be drawn supporting the incorporation of CSE into curricular structures at HEIs. Although our results indicate need on the part of industry and student demand for competent corporate social entrepreneurs, German HEIs have not yet integrated CSE-specific education in their curricula. However, the required competences are covered by CSE-related fields of study, which hampers the holistic education of CSE learners. A CSE curriculum needs to cover core CSE as well as key competences, and the engagement of stakeholders of the quadruple helix requires an adjustable and transversal approach of curriculum development.

These conclusions point to future research needs, which are necessary to better understand the nature of a CSE curriculum at HEIs. As CSE is scattered in different related disciplines, a flexible CSE curriculum-development model needs to be designed and implemented in different learning settings. It is also necessary to validate the findings by integrating the CSE concept and its competences into existing curricula or graduate programs. This process would be strengthened through a better understanding and a clearer view of how prevalent CSE practices are in the industry, based on low-threshold surveys to capture the quantitative nature of CSE. Further attention must also be paid to the engagement of stakeholders of the HEIs ecosystem, so that the CSE curriculum accounts for the interconnections of the different sectors.

It will also be interesting to further analyze the student perspective regarding the need for CSE education and how the CSE concept aligns with other relevant sustainability models such as the sustainable development goals (SDG). Although we could identify overlaps with CSE- and SDG-related competences, a thorough investigation would paint a clear picture of commonalities and complements, which would deepen the discourse of the emerging CSE concept.

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