TO PARTNER, OR NOT TO PARTNER? ASSESSING THE ROLE HIGHER EDUCATION INSTITUTIONS' PARTNERSHIPS PLAY IN EDUCATION FOR SUSTAINABILITY

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Abstract

Implementing education for sustainability demands higher education institutions to overcome various challenges, such as understanding the concept of sustainability, training change agents, curricular changes, among others. In this scenario, partnerships show themselves as important facilitating elements to mitigate such challenges. Thus, this study seeks to assess, empirically, a conceptual model regarding partnerships being used as facilitating elements to overcome challenges faced by higher education institutions during education for sustainability's implementation. To do so, a qualitative research, of a descriptive nature and that used a multicase study as a research strategy was carried out with six Brazilian higher education institutions. The results showed that partnerships are used to minimize challenges related to the identification on higher education institutions' stakeholders' demands, to the formalization and institutionalization of sustainability and education for sustainability and to changes in the curricula and teaching methodologies. It was also possible to observe that the challenges faced by higher education institutions can be grouped in five fronts, as recommended in the framework available in the literature and assessed in this research for its validation.

Keywords: Education for Sustainability; Higher Education; Partnerships; Challenges.

1 Introduction

The demand for business leaders to have knowledge, skills and attitudes that allow them to deal with sustainability-related issues has made higher education institutions (HEIs) pay attention to sustainability teaching. HEIs must form professionals who know how to respond to sustainability challenges (Tassone 2018), in addition to contribute to a fairer society (Brunquell, Brunstein and Jaime 2015).

It is in this scenario that education for sustainability (ES) appears, given that its main objective is to ensure that future business leaders contemplate in their actions and decisions not only economic aspects, but also social, environmental, ethical and cultural. However, HEIs face many challenges during ES' implementation, being those of different natures. Authors (2020a) point out that such challenges can be of a cultural or institutional nature, related to resources' obtaining, to HEIs' stakeholders' demands, among others. The authors also propose that such challenges can be grouped in fronts, which are related to (i) the identification of the needs of HEIs' stakeholders, to (ii) the formalization and institutionalization of sustainability and ES, to (iii) training of ES' change agents, to (iv) changes in curricula and teaching approaches and to (v) assessment and monitoring of ES' actions.

Facing the need to overcome the challenges inherent to ES' implementation process, Weiss and Barth (2019) point out that the process can be facilitated by the development of a group of change agents within the educational institution, which shall be responsible for bringing all stakeholders in the decision-making process regarding teaching-learning strategies, competencies etc. However, not only the internal group can contribute to ES' success, but also collaboration with external social actors to the HEI. Partnerships with companies can help identify stakeholders' demands on future leaders' skills (Benn and Rusinko, 2011) and formalize sustainability's concept, aligning the understanding of the academy to the market's (Naeem and Peach, 2010). Also, partnerships with other HEIs, businesses and society as a whole can provide teachers knowledge related to ES and to initiatives related to it (Fiates, Parente and Leite 2012). Partnership networks also help HEIs share experiences and knowledge in academic events (Gonçalves-Dias, Herrera and Cruz, 2013) and partnerships with specialists can help reform the curricular structure (Benn and Rusinko, 2011), in addition to contributing to expand good practices (Cincera, Biberhofer, Binka, Boman, Mindt and Rieckmann 2018).

Thus, Authors (2020b) point out that partnerships can be used as facilitating elements in the five fronts in which challenges for ES are allocated. It is in this context that this research lies, since

it seeks to empirically assess the authors' conceptual framework by analyzing the role HEIs' partnerships play in overcoming challenges for ES.

It is expected that this research advances ES' research domain, by assessing a conceptual framework, from empirical data. In addition, this research contributes to fill the gap identified by Weiss and Barth (2019) regarding the limited information sharing of some countries, from cases previously developed discussing ES' theme.

2 Theoretical Framework

2.1 Challenges and partnerships for education for sustainability

In a scenario that demands business leaders to know how to deal with sustainability issues, ES has emerged with the aim of ensuring that students consider in their decision-making processes, economic, environmental, social, cultural and ethical aspects (Brunquell et al. 2015). However, the United Nations Educational, Scientific and Cultural Organization (UNESCO) points out that ES is a complex process and should, among others, (i) contribute to lifelong learning; (ii) be locally relevant and culturally appropriate; (iii) consider the dynamic nature of sustainability; (iv) be interdisciplinary, (v) use a variety of pedagogical techniques that promote participatory learning and skills to develop students' thinking, (vi) be cross-sectional, and do not deal with the theme of sustainability in an isolated way, that is, in a specific discipline (UNESCO 2005 p. 30).

These demands, among others, make HEIs that wish to implement ES face several challenges by doing so. These challenges, present in ES' literature and commonly faced by HEIs in ES' implementation, were grouped by Authors (2020b) in five major fronts, which are: (i) identification of stakeholders' needs, (ii) formalization and institutionalization of sustainability and ES, (iii) training of ES' change agents and (iv) changes in curricula and teaching approaches, (v) assessment and monitoring of ES' actions.

Regarding front 1, 'identification of stakeholders' needs', it is necessary that the HEI knows what are market's and society's demands (Benn and Rusinko 2011) when it comes to knowledge, skills and attitudes that students should have to deal with sustainability-related issues. This helps student's formation be in line with society's actual needs. To do so, Meyer, Mader, Zimmerman and Cabiri (2017) emphasize the importance of collaboration between universities and their stakeholders, since they can bring different perspectives on society's actual needs regarding sustainability issues. Companies are examples of social actors with which HEIs can relate, since close contact between these partners can help educational institutions identify what such stakeholders are demanding from business leaders, regarding skills and competencies to deal with sustainability issues (Benn and Rusinko 2011).

The lack of 'formalization and institutionalization of sustainability and ES' (front 2) leads to many difficulties in ES' implementation. One of them is the lack of support from HEI's leaders, that can jeopardize the success of ES' implementation (Figueiredo and Tsarenko 2013; Blanco-Portela, Pertierra, Benayas and Lozano 2018), since it can hinder the allocation of financial resources (Cowell, Hogson and Clift 1998; Leal Filho 2000) and human resources (Authors 2020a) for the development and maintenance of ES' practices. Also, it may be the main cause for the fact that ES isn't seen by HEI's leaders as a priority (Figueiredo and Tsarenko 2013; Blanco-Portela et al. 2018; Kioupi and Voulvoulis 2019; Authors 2020a) in the institution, which brings negative implications for ES, such as the lack of internal structure (Kioupi and Voulvulis 2019) to support sustainable operations on HEIs' campuses and bureaucracy for resources' acquisition (Blanco-Portela et al. 2018; Kioupi and Voulvoulis 2019).

Moreover, lack of formalization of ES leads to ES' change agents' lack of knowledge regarding sustainability's concept (Palma, Alves and Silva 2013; Authors 2020a), often diffuse and abstract (Leal Filho 2000). One way to overcome this challenge is to develop partnerships with companies. They can help HEIs align the academy's perception of the concept of sustainability with

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the market's perception, contributing to mitigate this challenge. Thus, partnerships also contribute to the legitimation of sustainability's concept, leading to the development of a unified definition of the term (Benn and Rusinko 2011).

Collaborative relationships are also contributive to other aspects related to this front. Dlouhá, Glavic and Barton (2018) identified that networks focused on sustainability in higher education consist of an "important mechanism for systematic changes in higher education" (Dlouhá et al. 2018 p. 1). The authors also noted that higher education networks activate partnerships and develop strategies and communications that are relevant to educational policies. Thus, these networks contribute to add value to policy development, that may contribute to the formalization and institutionalization of ES in HEIs (Dlouhá et al. 2018).

Partnering with other HEIs and other social actors can also help HEIs develop programs and strategies for ES, helping them systematize and internalize ES' practices, consequently contributing to their formalization in the educational institution.

Regarding 'training of ES' change agents' (front 3), ES demands that teachers use teaching methodologies that allow students to develop their critical and reflective thinking. Thus, it is important to develop interdisciplinary initiatives (Cowell et al. 1998) and approaches that are more related to the community and most likely to contribute to students' sustainability learning (Lozano, Barreiro-Gen, Lozano and Sammalisto 2019), such as experiential learning. However, when it isn't possible due to lack of financial resources, teaching tools that allow actual situations' simulation, consist in an alternative (Motta, Mello and Paixão 2012).

However, it is evident that teachers often find themselves unprepared to use these approaches and methodologies that are more suitable for sustainability teaching. Thus, training these change agents (Palma et al. 2013; Gonçalves-Dias et al. 2013; Authors 2020a) is essential to ensure that sustainability teaching contributes to develop students' sustainability mindset (Rimanoczy 2014). One way to do that is by training teachers in symposia and workshops held towards promoting experiences' and good practices' exchange among HEIs' researchers and teachers (Gonçalves-Dias et al. 2013). Also, internal collaboration within the HEI, among teachers, also contributes to the professional development of the institution. This can also help mitigate teacher's lack of involvement in ES, another challenge commonly faced by HEIs (Blanco-Portela et al. 2018; Authors 2020a), as well as broaden the sustainability approach to teachers who are less adherent to sustainability's theme and helping sustainability teaching be less of an individual initiative (Down 2016).

Also, teachers who are more prepared to teach sustainability can also become less resistant (Palma et al. 2013; Gale, Davison, Wood, Williams and Towle 2015; Authors 2020a) in running their disciplines differently from the traditional ways.

Nevertheless, not only teachers' involvement is necessary to ensure that ES is successful, but also students' involvement. This can be done by from actions such as engaging students in teaching plans' co-creation (Czykiel, Figueiró and Nascimento 2015; Warwick, Wyness and Conway 2017), contributing to change students' culture (Araç and Madran 2014), which often hinders ES.

In order for 'changes in curricula and teaching approaches' (front 4) to be facilitated, HEIs can also develop collaborative practices with other HEIs, to make the transition from using traditional teaching approaches to interdisciplinary ones more fluid (Gadotti 2011). In this scenario, champions HEIs, which are reference in ES, can help those institutions that aim to better develop sustainability teaching, based on good practices' sharing (Cincera et al. 2018). Also, partnerships with companies are beneficial for overcoming challenges related to this front. Such cooperation "is essential and important to implement both practical experiences and scientific knowledge in university teaching and research" (Meyer et al. 2017 p. 17).

Another challenge faced by HEIs during ES' implementation is the difficulty in measuring the results of ES' efforts (Cebrián 2016; Shephard, Harraway, Lovelock, Mirosa, Skeaff, Slooten et al. 2015), making it difficult to evaluate ES' actions and practices. One way to mitigate this challenge is by collaborating with champion HEIs, that is, HEIs that are reference in ES' practices and, therefore, may act as evaluators of ES' actions and practices developed by HEIs (Cebrián 2016). Thus, in this

continuous front ('assessment and monitoring of ES' actions'), partnerships with other HEIs contribute to benchmarking science, to good practices' exchange (Cebrián 2016) and to use partners as critical friends, evaluating the current ES' practices of the focal HEI.

Based on the above and as pointed out in Authors's (2020b) conceptual framework, partnerships can act as facilitating elements in all fronts necessary to overcome ES' challenges (Figure 1).

Figure 1. Proposal of a framework comprising fronts to overcome ES' challenges and partnerships as facilitating elements.
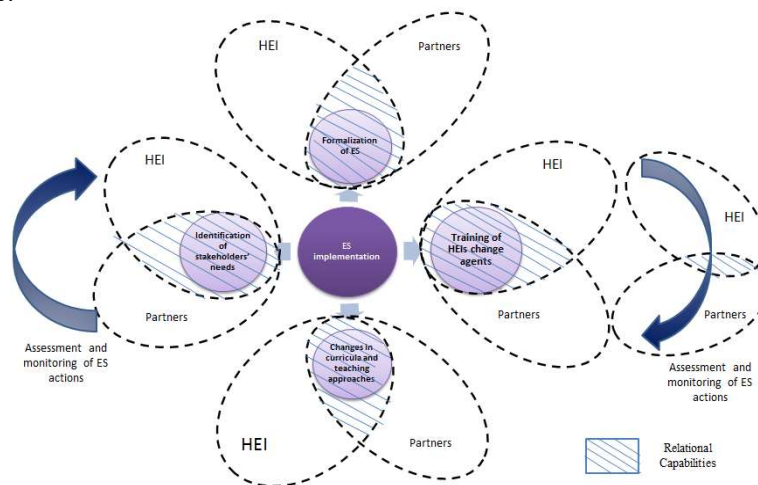
Source: Authors (2020b, p. 7).

Although the conceptual framework proposed by the previously mentioned authors comprises (i) the presence of five fronts to overcome challenges, (ii) partnerships as facilitating elements to mitigate the challenges of these fronts and (iii) the presence of relational capabilities in collaborative relationships developed by HEIs, in this research the first two considerations of Authors's (2020b) framework will be analyzed.

3 Methodology

The present study has a qualitative approach, since the social realities of the HEIs analyzed were interpreted, from the participants' perspective (Bauer and Gaskell 2002), seeking to understand the challenges they face in ES' implementation. As to its nature, this research is characterized as descriptive, since the researcher did not interfere on the facts, only held its registration, analysis, classification and interpretation (Raupp and Beuren 2003).

The research strategy used was the multiple case study (Yin 2015) that allowed us to analyze, in depth, the challenges faced by the HEIs investigated, as well as the facilitating elements to mitigate such challenges. The selection criteria of the cases here analyzed were non-random, intentional, and due to accessibility (Eisenhardt 1989). In addition, HEIs that had management courses at an undergraduate level and declared ES' practices were selected. In this scenario, six Brazilian HEIs were investigated, three of them being named, randomly, Alpha business school, Beta University and Gama College, since the participants of these institutions requested that data would be published anonymously. The HEIs here analyzed, their natures and locations are presented in Table 1.

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Table 1. HEIs investigated in this research.

HEI	Nature	Location
Alpha business school	Private	South region of Brasil
State University of Paraná (UNESPAR)	Public	South region of Brasil
Federal University of Rio Grande do Sul (UFRGS)	Public	South region of Brasil
Gama College	Private	South region of Brasil
Beta University	Private	Southeast region of Brasil
Higher education school of propaganda and marketing (ESPM)	Private	Southeast region of Brasil

Source: Authors (2020)

The selection of HEIs, given the criteria previously mentioned, contributed to ensure access to necessary information for the fulfilment of the objective proposed in this research.

Semi-structured interviews were conducted from April to September 2019, with one participant from each HEI and they were questioned on the challenges faced by the HEI during ES' implementation, as well as on the facilitating elements used by the institution to mitigate such challenges. Also, documents, such as the political-pedagogical project (PPP) of the courses and websites of the HEIs were analyzed with the same purpose. The interviews were recorded with the consent of the participants and transcribed to facilitate further analysis. Once collected, data were analyzed by the content analysis' technique recommended by Bardin (2016), being the fronts needed to overcome challenges related to ES proposed by Authors (2020b) considered as categories of analysis: (i) identification of stakeholders' needs, (ii) formalization and institutionalization of sustainability and ES, (iii) training of ES' change agents, (iv) changes in curricula and teaching approaches and (v) assessment and monitoring of ES' actions.

The conceptual framework (Figure 1) was used to verify empirically, the presence of partnerships as facilitating elements in the fronts needed to overcome ES' challenges. Using multiple data sources contributed to ensure the internal validity and reliability of the study, and the study protocol contributed to ensure its external validity, since it allows replication in future research, of the study here developed.

4 Analysis

4.1 Identification of stakeholders' needs (front 1)

Challenges related to the lack of information on the actual demands of HEIs' stakeholders are allocated in front 1, ''identification of HEIs' stakeholders' needs' (Authors 2020b). In this scenario, the Alpha business school and UFRGS seek to overcome this challenge by partnering with companies who provide them such information. At UNESPAR, on the other hand, it was possible to observe that the Department of Administration of the HEI, from its close relationship with the Junior Company of the department, overcomes this challenge through mapping students who have studied at the HEI and identifying where they are, what they are doing and what the market is expecting from them, now business leaders or employees. This helps the department's proximity to these former students, whenever necessary, whether to give a lecture during some academic event, or to ask them for help on information regarding the current demands of the market regarding business leaders' skills and competencies. According to UNESPAR's interviewee, a facilitating element to

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mitigate this challenge (lack of information on HEIs' stakeholders' demands) is the relationship the HEI keeps with these former students, thus, consisting of a collaborative partnership between these actors. Thus, for the HEI's interviewee, it is "this network of relationships (with students who have graduated from the HEI) that information is obtained and helps us know what to do".

Unlike the other HEIs investigated, Beta University seeks to ensure the 'identification of stakeholders' needs' from researches conducted on a national and international level. As Beta University's interviewee highlights, in order to identify such needs, the HEI develops researches with business schools and companies, researches in companies' institutional websites or in websites of institutions oriented towards sustainability, organs and agencies that operate in favor of sustainable development, such as PRME, participates in conferences and develops surveys with students. Likewise, Gama College uses researches to identify such demands, but it also partners with companies and consults business journals to identify its stakeholders' needs.

Thus, the 'identification of stakeholders' needs', pointed out by Benn and Rusinko (2011) as a challenge faced by HEIs in ES' implementation is mitigated from the partnerships that act as facilitating elements, in the cases of the Alpha business school, UFRGS, UNESPAR and Gama College. Such evidences corroborate Authors (2020b) regarding partnerships being considered facilitating elements to overcome challenges of front 1. Beta University, on the other hand, does not use of partnerships to identify the needs of its stakeholders, as mentioned previously.

4.2 Formalization and institutionalization of sustainability and ES (front 2)

Among the challenges related to this front, the lack of financial resources allocated to ES, the bureaucracy and the non-prioritization of ES were evidenced in the empirical data. The Alpha business school faces a challenge related to scarce financial resources, since, as stated by the school's interviewee "the financial challenge is a big challenge […] We don't have a big budget geared to this (ES). Thus, we can only do this due to partnerships developed, due to partners with key partners and key institutions."

This evidence is in accordance with Cowell, Hogson and Clift (1998) and Leal Filho (2000) who indicate the lack of financial resources for ES' practices and actions as a challenge commonly faced by HEIs during ES' implementation. Even though this challenge exists, from the excerpt the Alpha business school's interviewee's speech, it was possible to observe that partnerships consist in facilitating elements to overcome it.

Another challenge related to this front and faced by UFRGS, is the bureaucracy to obtain financial resources for sustainability-related projects (Blanco-Portela et al. 2018; Kioupi and Voulvoulis 2019). UFRGS' interviewee exemplifies that by sharing a difficulty faced during a sustainability project developed by a group of students in a discipline of the Business Administration course:

> We received financial resources from a private enterprise to implement a solar pole with power generation. However, we couldn't access those resources and I had to enter the common fund and had no guarantee that the money would be used for its purpose. Given the bureaucracy faced, we found it better to give up getting that money from the company that would provide it and we ended up getting the money from students' projects [UFRGS' interviewee].

The interviewee indicates that, in his opinion, one way to mitigate this challenge consists in developing partnerships with private companies, "like American universities do".

However, in addition to the difficulty and bureaucracy of acquiring resources for ES' and sustainability's practices, another challenge related to this front, identified in ESPM's empirical data and faced by HEIs in ES' implementation consists in the "the importance that the university gives to

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the topic", since it has to "understand that it means more than discarding garbage correctly [...] that it's much more than that" [ESPM's interviewee].

Given the above, in order to insert the concept of sustainability not only in teaching, research and extension of business schools, but also on the campuses of universities, HEIs must dwell with the lack of internal structure (Kioupi and Voulvoulis 2019), so as to include sustainability in operations of their campuses.

Actions that help 'formalization and institutionalization of sustainability and ES' were evidenced in Beta University's empirical data. One of these actions was the insertion of ES in the pedagogical project of the HEI's Business Administration course. This was only possible due to the participation of the University in a research project sent to the edict of CAPES (mentioned previously), which was attended by several institutions that discussed ES' theme. Thus, it is evident that, albeit in an indirect way, the partnership with these institutions who also were part of the project funded by CAPES has helped Beta University overcome the challenge regarding 'formalization and institutionalization of ES'.

From the exposed, it can be observed that partnerships consist in facilitating elements for overcoming challenges related to the lack of financial resources, bureaucracy and the inclusion of ES in the Business Administration undergraduate course's PPP, contributing to formalize and institutionalize it. These evidences corroborate Authors (2020b) regarding the importance of partnerships as facilitating elements for overcoming challenges related to the 'formalization and institutionalization of sustainability and ES' in HEIs.

4.3 Training of ES' change agents (front 3)

Alpha business school and Gama College face a challenge related to students' awareness on the importance of sustainability in academic activities. The business school's interviewee points out that "much of what we did in these last years was 'pushed' to the students [...]", meaning that the students don't always see the importance of approaching sustainability issues in disciplines and academic projects.

Also, the interviewee from Gama College points out the difficulty of embedding sustainability-oriented values in undergraduate students. This is so due to the fact that in every sustainability-related action that was developed by the institution, as for example, collecting recyclable materials, students were involved mainly because they could gain complementary hours by doing so. However, the college's academic leaders are trying to change this culture regarding doing good deeds for the exchange of complementary hours, since this exchange no longer exists nowadays.

On the other hand, empirical data from UFRGS allowed observing the need to train other ES' change agents: the teachers. This can be seen in an excerpt of the HEI's interviewee regarding an initiative that arose from the need to teach sustainability in an interdisciplinary way:

> We have done something nice regarding working with different disciplines jointly. There is a colleague of mine that teaches Marketing… on the day she was to discuss forms of consumption, we conducted a joint class […]. We conducted a debate, showing how consumption occurs when we look at it from the Marketing perspective and how it can be seen from the sustainability perspective [UFRGS' interviewee].

Pedagogical materials were made available to teachers of different disciplines, hoping that they would continue to do align sustainability with the main themes of their disciplines in subsequent semesters. Some teachers engaged in the initiative, but others didn't. UFRGS' interviewee points out that a possible reason for that lies in the fact that many teachers don't know how to teach in a

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transversal and interdisciplinary way. This challenge refers, therefore, to the lack of 'training of ES' change agents'.

From the foregoing, it can be observed that the Alpha business school, Gama College and UFRGS demand trainings with ES' change agents – teachers and students of the Business Administration course in these cases - to be carried out. Such evidences are in line with Palma, Alves and Silva (2013), Gonçalves-Dias et al. (2013), Figueiró, Silva and Philereno (2019) and Authors (2020b) who also evidence this challenge in their studies. The empirical data also showed that partnerships aren't used, by the HEIs here analyzed, as facilitating elements to overcome challenges regarding 'training of ES' change agents' (front 3).

4.4 Changes in curricula and teaching approaches (front 4)

One of the main challenges faced by HEIs and that is related to this front is the difficulty in using interdisciplinary approaches in sustainability teaching (Cowell et al. 1998). In UFRGS' case, the situation reported by its interviewee allowed observing that the HEI's Business Administration department sought ways to teach sustainability in a not-so fragmented way, bringing the pedagogical approach used to sustainability teaching closer to the transversal approach recommended by UNESCO (2005). This was evidenced from an action undertook by the department with teachers from different disciplines, as previously mentioned. UFRGS' interviewee led this action in which some teachers who were more familiar with the sustainability theme joined the classes of other colleague teachers of theirs, in order align the central theme of each discipline to sustainability.

However, according to the interviewee, "teachers who were interested in it (interdisciplinary teaching) engaged in the action... on the other hand, others who saw it as something that demanded more effort, didn't (engage in the action) ... they didn't want to change too much." In this scenario, the resistance of some teachers (Palma et al. 2013; Gale et al. 2015; Authors 2020a) to teach sustainability in an interdisciplinary way does not only derive from lack of training, as previously evidenced, but also from the absence of curricular structures that comprise teaching sustainability in an interdisciplinary way. In this scenario, it is evidenced that HEIs' academic leaders must prioritize ES in order to avoid it from being focus of merely individual initiatives (Down 2016). Actions should be taken in order to use approaches similar to the ones used by the Alpha business school, which seeks to teach sustainability transversally, so that the students "gradually perceive the theme's value", as pointed by the business school's interviewee.

Another challenge faced by HEIs in ES' implementation consists in teaching methodologies for sustainability. Gama College, Alpha business school, UFRGS and ESPM seek ways to bring real problems, faced by companies that are inserted in the market, to their students, so that they develop solutions to those problems in disciplines and academic projects, developing their critical and reflexive thinking. Gama College does that from partnering with the Federation of Industries of the state of Paraná and with Parcs company, while ESPM does it from partnerships developed with external social actors, such as non-governmental organizations (NGOs).

In the case of Alpha business school, the companies that partner with the school present challenges to undergraduate students during the interdisciplinary project that has to be carried out during the course and contribute to show them what are their actual needs on sustainability-related issues. UFRGS also partners with companies that bring the students real-life problems from which, according to the institution's interviewee, students' skills and competencies to deal with such demands are developed. This helps approaching sustainability in a practical way, other than in a merely theoretical manner.

These actions, such as those carried out by Alpha business school and UFRGS, contribute to students' experiential learning, as recommended by Motta, Melo and Paixão (2012).

An action held by Beta University that contributed to 'changes in curricula and teaching approaches' was the creation of the discipline "Strategic management of sustainability", inserted in the curricular structure of the Business Administration course, as a compulsory discipline. According

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to the HEI's interviewee "this discipline had a quite differentiated proposal since it comprised games and an active and participative dynamic", thus contributing to the development of students' critical and reflective thinking. The games contribute to train students in the decision-making process, in addition to the fact that they do not require financial resources or additional efforts as those that may be required in experiential learning (Motta et al. 2012). Moreover, this pedagogical approach used in the discipline required sought to promote a change in the sustainability mindset (Rimanoczy 2014) of the students of the discipline.

From the exposed, the collected data allowed observing the use of partnerships with other social actors (to develop solutions to real-life problems) as facilitating elements to overcome challenges related to 'changes in curricula and teaching approaches', being in accordance with Authors's (2020b) conceptual framework, in which the collaborative relationships may be used to mitigate such challenges.

4.5 Assessment and monitoring of ES' actions (continuous front)

Actions related to this continuous front ('assessment and monitoring of ES' actions') were only relevant in the empirical data of the Alpha business school. As pointed out by the school's interviewee, the business school must reinvent itself to keep ES' practices "alive". This shows concern to ensure the assessment and monitoring of ES' actions, however in the other cases here investigated, actions to mitigate challenges related to the difficulty of measuring the results of ES' practices were not evidenced, thus being at odds with Cebrián (2016) and Shephard et al. (2015).

It is recommended, however, that HEIs ensure that this front is being taken into consideration, since the 'assessment and monitoring of ES' actions' was evidenced in Authors's (2020b) study as something that should take place concomitantly to the other fronts so as to ensure that ES' efforts bring the expected results.

Table 2 presents a summary of the challenges to implement ES, evidenced in the empirical data of the cases here analyzed, as well as in which HEIs partnerships act as facilitating elements to overcome such challenges.

Table 2. Challenges identified in the empirical data and presence of partnerships as facilitating elements for overcoming ES' challenges

Front	Challenge (identified in empirical data)	Partnerships act as a facilitating element
Front 1: Identification of stakeholders' needs	Lack of information on HEIs' stakeholders' needs	Alpha business school, UFRGS, UNESPAR, Gama College
Front 2: Formalization and institutionalization of sustainability and ES	Lack of allocation of financial resources for ES' actions	Alpha business school
	Bureaucracy to achieve financial resources	Not evidenced
	Difficulty to formalize and institutionalize sustainability and ES	Beta University
Front 3: Training of ES' change agents	Students aren't aware of ES' importance	Not evidenced
	Teachers' lack of knowledge on how to teach sustainability in a transversal and interdisciplinary way	Not evidenced
Front 4: Changes in curricula and teaching approaches	ES as an individual initiative	Not evidenced

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	Teachers' resistance regarding teaching sustainability from different approaches from the traditional ones	Not evidenced
	Experiential learning for sustainability teaching	Alpha business school, ESPM, UFRGS, Gama College
'Continuous' front: Assessment and monitoring of ES' actions	Difficulties assessing ES' practices	Not evidenced

Source: Authors (2020)

From Table 2 it can be observed that the challenges identified in the empirical data collected can be allocated into the fronts (Figure 1) proposed by Authors (2020b). It was also possible to observe that, in the cases here investigated, partnerships are used by HEIs as facilitating elements to overcome challenges of fronts 1, 2 and 4. However, they weren´t evidenced as key facilitators for overcoming challenges of front 3 ('training of ES' change agents') or of the continuous front 'assessment and monitoring of ES' actions'. In this scenario, even though Authors (2020b) proposed that partnerships can be used to mitigate challenges of all five fronts, these collaborative relationships are not being used by the HEIs here investigated in all their potentiality.

5 Discussion

Among the challenges identified in the empirical data of the HEIs here investigated, it was observed that the challenge related to the 'identification of stakeholders' needs' (front 1) pointed by Benn and Rusinko (2011) as one that is commonly faced by HEIs is mitigated by UFRGS, UNESPAR and Gama College from partnership development with external actors. These HEIs develop partnerships with companies to align ES' actions to the demands of the market and society regarding how future business leaders should deal with sustainability-related issues. In this scenario, the empirical data of this research are in accordance with Authors's (2020b) study, since partnerships were evidenced as facilitating elements to overcome challenges related to this front.

In addition to using partnerships to identify stakeholders' demands, HEIs can do what Beta University and Gama College do, that is, consult business magazines and surveys of national and international reach. This helps ES' change agents know international and other locations' demands that may be different from the ones of the companies with which they relate. Thus, HEIs' knowledge regarding what is being demanded of business leaders can be broaden to a global scope, contributing to form leaders who are prepared to deal with sustainability-related issues (Tassone 2018).

Another challenge faced by HEIs and exemplified by the Alpha Business School is the one related to the 'formalization and institutionalization of sustainability and ES' (front 2), more specifically, to the lack of financial resources for ES' actions and practices (Cowell et al. 2018; Leal Filho 2000). The Alpha business school relies on partnerships with other institutions to access and obtain financial resources. Partnerships are thus, facilitating elements to overcome this challenge.

Even though that is not the case of the business school, other HEIs who face difficulties formalizing and institutionalizing ES may struggle with it due to the lack of support from deans and directors of the institution (Figueiredo and Tsarenko 2013; Blanco-Portela et al. 2018). Such support is essential to formalize and institutionalize ES in the HEI, through its inclusion in documents that dictate the policies of the institution. This support also contributes to HEIs become signatories of initiative such as PRME, as is the case of Gama College and UNESPAR. Moreover, it facilitates the allocation of human resources that are dully trained to develop ES (Authors 2020a), which ends up being a concern only present in HEIs who consider ES a priority. Such support also contributes to mitigate the non-prioritization of ES (Figueiredo and Tsarenko 2013; Blanco-Portela et al. 2018;

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Kioupi and Voulvoulis 2019; Authors 2020a), enabling improvements in HEIs' internal structure (Kioupi and Voulvoulis 2019) by inserting sustainable operations on campuses, for example.

Although many times HEIs may not have sufficient human resources to do so, on account of its staff and activities which they are responsible for, they can develop partnerships with specialists to optimize their ES' practices, with the staff they already have. Partnerships with 'champion' HEIs (Cebrián 2016), for example, can help educational institutions that wish to implement ES identify good practices and bring them, albeit in an adapted form, to their own context.

In this scenario, the empirical data showed that partnerships are facilitating elements for the acquisition of financial resources and for ES' formalization (as in the case of Beta University), which is in line with Authors (2020b) regarding challenges related to the 'formalization and institutionalization of sustainability and ES' (front 2). Although not evidenced in the HEIs here investigated, partnerships may also be used for experiences' and good practices' sharing, so as to contribute with references of successful practices regarding actions to formalize the concept of sustainability and ES.

'Training of change agents' (front 3) is necessary for teachers' involvement with ES, as well as to ensure that they promote changes in curricular structures and in methodologies so as to encourage students' involvement as well. The lack of involvement of these actors (Blanco-Portela et al. 2018; Authors 2020a) can be mitigated from actions such as that in which UFRGS has sought to engage students in teaching plans' cocreation (Czykiel et al. 2015; Warwick et al. 2017).

Teachers should also be trained (Palma et al. 2013; Gonçalves-Dias et al. 2013; Authors 2020a) on sustainability concepts, often unknown by these change agents (Palma et al. 2013; Authors 2020a), due to the fact that it is an abstract and diffuse concept (Leal Filho 2020). Teachers should be also be trained on how to teach sustainability in an interdisciplinary (Cowell et al. 1998) and transversal (UNESCO 2005) way. Moreover, they should know how to use teaching methodologies that allow students to be more critical and reflective, helping them deal with what's demanded by the market regarding sustainability-related issues (Figueiró et al. 2019).

Training teachers can also contribute to minimize the resistance (Palma et al. 2013; Gale et al. 2015; Authors 2020a) they may have in teaching disciplines differently from the traditional way, more verticalized. This resistance is often derived from their lack of knowledge on how to teach sustainability, using pedagogical methodologies that are more appropriate to ES, as well as making the necessary curricular changes to optimize sustainability teaching. In addition, teachers that are dully trained can contribute to minimize the challenge faced by many HEIs regarding ES being addressed only as individual initiatives (Down 2016), that is, only by teachers who have greater adherence to the theme.

In contrast, the non-involvement of students is a barrier yet to be transposed by institutions such as Gama College and the Alpha business school, in which it was possible to observe difficulty to educate students on ES' importance. This highlights the need for training of these change agents as well, in addition to the teachers. One way to mitigate this challenge consists in organizing specific events, such as the Social Responsibility Fair held at UNESPAR, for example. They seek to maximize the involvement of students in actions directed to ES, trying to change, albeit gradually, the thought that participating and engaging in such actions must be directly related to academic gains. Another action that could contribute to mitigate this challenge is conducting lectures for the students, contemplating the importance of sustainability and the peculiarities of its teaching. This would help students understand ES' importance, thus contributing for the development of sustainability-oriented values and culture (Araç and Madran 2014).

Although Authors (2020b) point out that partnerships can be facilitating elements to overcome challenges related to 'training of ES' change agents' (front 3), the empirical data showed that the Brazilian HEIs here investigated are not using them to mitigate challenges of this nature. However, collaborative relationships with other HEIs may consist in an alternative to train teachers. Partner HEIs could develop such training to teachers, sharing pedagogical approaches, teaching methodologies and changes in curricular structures that have already been successfully implemented.

Example of an action of this nature is the one that was developed by UFRGS, which sought to assist teachers who, until then, hadn't approached sustainability in their disciplines.

Regarding front 4, 'changes in curricula and teaching approaches', it was possible to observe that UFRGS and the Alpha business school do use different methodologies in sustainability teaching, such as engaging students in the development of solutions to actual problems faced by companies that are partners of the HEIs. ESPM also uses this methodological resource by bringing problems faced by NGO they partner with, so that students provide them viable and sustainable solutions. Also, Gama College partners with Parcs to broaden the scope of sustainability teaching beyond the classroom and beyond theoretical teaching. These partnerships contribute to experiential learning and simulating solutions to real problems (Motta et al. 2012), appropriate approaches to ES. These partnerships with companies and NGOs are aligned with Authors (2020b), regarding overcoming challenges related to front 4.

Regarding actions of 'assessment and monitoring of ES' actions', which should occur concomitantly with others, in the empirical data of the HEIs here analyzed, partnership development aimed at this purpose was not observed. In this scenario, collaborative relationships with 'critical friends' to assess whether the efforts for ES are being effective and to minimize the challenge of measuring the results of such practices (Cebrián 2016; Shephard et al. 2015) could be developed. Thus, even though Authors (2020b) highlight the relevance of using partnerships for this purpose, they were not evident in the empirical data of the HEIs investigated in this research.

6 Final Considerations

The objective of this research was to analyze partnerships' role as facilitating elements in overcoming challenges faced by HEIs in ES' implementation, since Authors (2020b) proposed, in a conceptual framework, that partnerships can be facilitating elements on the five fronts needed to overcome ES' challenges.

The empirical data showed how these partnerships are used by the HEIs investigated, to mitigate some of the challenges they face. It was possible to notice that partnerships are used as facilitating elements to overcome challenges of fronts 1, 2 and 4 (Figure 1). Thus, it was observed that the Brazilian HEIs here investigated aren't using partnerships as facilitating elements to overcome challenges related to front 3 ('training of HEIs' change agents') or to the continuous front ('assessment and monitoring of ES' action').

However, such institutions could use partnerships with other HEIs, with specialists and with other 'critical friends' as a way to mitigate such challenges. These partners can provide training to the HEI's change agents, as well as share good practices regarding experiences on teaching methodologies and pedagogical approaches that are appropriate to ES.

Thus, the HEIs here investigated, as well as others that may not be using partnerships to its full potential, can perceive that using partnerships for overcoming challenges related to training ES' change agents (front 3) and to the assessment and monitoring of ES' actions' (continuous front) can contribute to improve ES' implementation in such educational institutions. In this scenario, such evidence consists in a practical contribution of this research, since ES' change agents can contemplate partnership development for these purposes in ES' planning activities.

In spite of its contributions and the fulfilment of the objective proposed, the present study has some limitations: (i) the limited number of cases analyzed makes it impossible to generalize the results, and (ii) the context of the HEIs analyzed, which demand that the results here presented are adjusted, if used by other HEIs and business schools, to the realities of different contexts.

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7 Implications and Further Research

The evidences of this research regarding social actors with whom HEIs have partnered to implement ES, as well as how these partnerships can be used to help such implementation be effective, provide insights to ES' change agents that are engaged in ES' implementation in their institutions. The evidences of this research showed that partnerships can be developed aiming at financial resources' acquisition, at helping students assess real-life problems and develop their critical and reflexive thinking by proposing solutions to it, at formalizing ES in the HEI, among other purposes. Thus, the main theoretical contribution of this research lies, thus, in empirically assessing the role partnerships play in HEIs, as facilitating elements for overcoming ES' challenges.

As future research, it is recommended replication of this study in HEIs from other countries, so as to highlight similarities and contextual differences, as well as assess if educational public policies developed in specific regions of the world favor HEIs' partnership development with other social actors, towards ES.

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