
Fostering the Professionalization of Business Students Through Education for Sustainable Development at University

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Abstract

Achieving sustainable development will not be possible without the effective integration of education for sustainable development (ESD) at all educational levels. However, to include these aspects in the university context, it is necessary to provide professors with mechanisms, resources and tools that allow the transmission of social and environmental concerns of our society to the students, obtaining as a result informed and responsible professionals in their fields of specialization. In this context, the objective of this paper is to present successful learning experiences which introduce the concept of sustainability in the area of business studies, and promote a more responsible professional development of the university business students. Moreover, these experiences could help

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university educators in their ESD professional development. These innovative experiences have been applied in the Spanish University System. The findings of this research bring knowledge about the understanding of the sustainability concept in a high education context.

Keywords

Education for sustainable development (ESD) · Sustainability · Higher education

1 Introduction

United Nations saw the need for education on the concept of sustainability—at all levels and in formal and informal education—to raise awareness about social and environmental problems, according to the Decade of Education for Sustainable Development (UN 2002). According to UNESCO, education for sustainable development (ESD) is defined as “*an emerging but dynamic concept that encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future*” (UNESCO 2002: 11).

Education, and specially Higher Education, has an important role in creating sustainable solutions to the current problems of the world for two basic reasons. On the one hand, the university student has the degree of maturity required to analyse complex concepts—as the broad term sustainable development. On the other hand, the social impact of a university education in sustainability can be greater than in other educational levels, either by the ability to put into practice the concepts learned in the short term or the potential influence they can exercise to hold positions of responsibility in organizations.

A key issue of the integration of Spanish universities into the new European Higher Education Area (EHEA) is to prepare students for their future careers as well as maximizing their personal development and their contribution to a sustainable and democratic knowledge-based society.

In this sense, it is necessary to introduce in the teaching programs a debate around issues of sustainability and social responsibility in organizations, in order to train and develop future professionals that strive to progress towards sustainable development. In this regard, business management field has become one of the most noticeable areas to accelerate the progress. However, addressing issues such as ‘environmental and social accounting’, ‘triple bottom line’, ‘sustainability reporting’, ‘cleaner production’, ‘corporate social responsibility’, or ‘socially responsible investment’ involves, on the one hand, the incorporation of basic concepts of sustainability in the teaching material of the courses. On the other hand, it implies the student’s effort for assimilating and discussing around organizational practices

that go beyond the traditional model of business, developing skills to generate a critical and proactive view towards sustainability.

One important requirement to include these issues in the university context is to provide educators (professors) with mechanisms, resources and tools that allow the transmission of social and environmental concerns of our society to the students, obtaining as a result informed and responsible professionals in their fields of specialization.

Within this context, after analysing whether the students are familiar with the concepts of sustainability and social responsibility, this study will present successful learning experiences based on creativity, innovation and the use of Information and Communications Technologies (ICT)—e.g. service-learning or cooperative learning—to introduce the concept of sustainability in the area of business studies, and to promote a more responsible professional development of the university business students. Moreover, these experiences could help university educators to support their ESD professional development.

These innovative experiences have been applied in the Spanish University System. The findings of this research bring knowledge about the understanding of the sustainability concept in a high education context.

The rest of this paper is structured as follows. Section 2 reviews the theoretical background related to topics involved in the learning experience presented in this paper. In Sect. 3, it is described the experiences, presenting the activities and summarising the results. Finally, Sect. 4 presents the main conclusion of the study.

2 Theoretical Background

Sustainable development is defined as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*” (WCED 1987). There are four dimensions in sustainable development—society, environment, culture and economy—which are intertwined, not separated. Universities have an important societal position as educational institutions for future professionals and may accelerate the change towards sustainable development (De Lange 2013). In the last decade, Higher Education System in Europe has been transformed and this could represent an opportunity to incorporate sustainability into the curricula of degrees and master degrees. In fact, a key issue of the Bologna Process is to prepare students for their future careers as well as to maximize their personal development and their contribution to a sustainable and democratic knowledge-based society.

However, until now, the basic contents included in business and finance education are the value of money, investment analysis, the cost of finance operations, weighted average cost of capital (WACC), portfolio management, markets and financial assets and operation of and relationships with financial institutions. Those

concepts are studied from a classical investment perspective, but considering the current socioeconomic situation, it is desirable for students to learn the new management possibilities that bear in mind more criteria than those only related to economic aspects. Sustainable development, corporate social responsibility (CSR) and socially responsible investing (SRI) have become some of the most prominent topics for researchers, business community, financial markets and society in recent years. Indeed, SRI has grown rapidly around the world, especially after the most recent global financial crisis.

In this regard, it is important for students of business and finance to change their curricula according to the new market demands. The rising demand of professional trained in aspects related to social responsibility, sustainability of organisations and sustainable finance justifies the introduction of the concepts of sustainable development, CSR and SRI in business and finance education. For instance, a student of business should know the concept of CSR, which is “*the voluntary integration of social and environmental concerns in their business operations and its relationships with partners*” (COM 2001) or as European Commission recently remarks “*the responsibility of enterprises for their impacts on society*” (COM 2011). Future managers should be more aware about the concept of sustainable development and CSR, since the implementation of CSR is becoming very necessary for survival in the changing business world. Likely, a student of finance should know the best practice for investors to incorporate CSR in their investment decision (Renneboog et al. 2008), which is SRI “*an investment discipline that considers environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact*” (US-SIF 2015). In fact, there are a growing number of investors seeking to stimulate the economic recovery in a more sustainable way. In this new scenario, SRI supports the emergence of a more sustainable economic system.

To afford aspects related to CSR and SRI, students should work harder on assimilating and reflecting on the concepts that go beyond the strictly economic and financial traditional vision, developing a critical and proactive spirit regarding sustainability. Students must fully understand the economic, social, governance and environmental impacts of the business if they wish to advance towards sustainable development (Galea 2004).

The integration of CSR into Higher Education is an ongoing process aimed at training professionals that search for the best possible relations between society, environment and business, taking into account aspects such as human development, human rights, justice, equity, and respect for diversity. In this respect, European Commission, in its 2011 report “*A renewed EU strategy 2011–2014 for Corporate Social Responsibility*”, highlights the relevance of the integration of CSR in future learning programs for professionals.

Higher Education provides society with graduates able to combine knowledge with problem-solving capacities in the broadest sense. To include ESD in the university context, it is mandatory to provide professors with the necessary tools

and skills to transfer their knowledge into business opportunities; and to offer resources that they could use to teach and discuss sustainable development issues. To develop these capacities, during the learning process students should be involved in complex cases of the real world. In this educational context, the learning experiences based on creativity, innovation and the use of ICT could be successfully used to construct knowledge by working on complex problems together.

3 Method

Within this context, the first step in this research is to study the university students' perceptions about sustainable development, specifically about CSR and SRI issues and the need of including CSR and SRI concepts in the curricula of business students. To examine university students' perceptions, we conducted a field survey with a sample of business and finance students. Specifically, this study is addressed to the finance students of University Jaume I (UJI) in Castellón (Spain) during the academic year 2013–2014.

In the second step, after a deep analysis of the previously defined issues in business and finance education contents, innovative experiences were adopted to show students the role of the SRI in the financial markets and CSR in the companies. We designed five innovative experiences and projects to show students the role of the sustainable development in the financial markets and in the management of companies.

Specifically, this paper presents three innovative activities to show students the role of the SRI in the financial markets and CSR in the companies and two learning experiences in the Higher Education based on service-learning methodology and cooperative learning.

Table 1 shows the different proposed experiences related to the challenge of obtaining an education for sustainable development. Concretely, it presents the learning experiences performed associated to the aforementioned challenge and the current limitations identified to achieve it.

As Table 1 highlights service-learning and cooperative learning are potentially rich educational experiences. On the one hand, they allow students to understand the role of the SRI in the financial markets and CSR in the companies. On the other hand, they improve their personal, social, and critical thinking skills and develop the attributes required by university and for industry.

Cooperative learning has been defined as a “*small groups of learners working together as a team to solve a problem complete a task or accomplish a common goal*” (Artz and Newman 1990). Although the basic principles of cooperative learning do not change, there are several variations of the model. For example, Johnson and Johnson (1975) focus on developing a specific structure that can be incorporated with a variety of curriculum's, with an emphasis on integrating social skills with academic tasks.

Table 1 Learning experiences performed. General outline

Challenge	Implications for learning-teaching process		Current limitations	Proposals		Outcomes
	For teachers	For students		Subject	Experience	
Universities as accelerators for the change towards sustainable development	The incorporation of basic concepts of sustainability in the teaching material of the courses	Student's effort for assimilating and discussing around organizational practices that go beyond the traditional model of business, developing skills and attributes to generate a critical and proactive view towards sustainability present and for future generations	Scarcity of mechanisms, resources and tools that allow the transmission of social and environmental concerns of our society to the students	Financial and Corporate Social Responsibility)	Service-learning project	Knowledge and understanding Skills Attributes
				Financial and Bank Management (Diploma in Labour Relations)	Cooperative -learning	Knowledge and understanding Skills Attributes
			The basic contents included in business and finance education are studied from a classical investment perspective, without bearing in mind more criteria than those only related to economic aspects	Financial Operations Valuation (Finance and Accounting Degree)	The concern about sustainability aspects was considered in different lessons, introducing a sustainable profile in questions such as project finance, private equity assessment, or risks analysis.	Knowledge and understanding
				Operational Auditing (Finance and Accounting Degree)	Analysis of the relationships between operational auditing and sustainability and identification of weaknesses in the management systems related to CSR	Knowledge and understanding
				Treasury Management (Finance and Accounting Degree)	Introduction of the CSR and SRI concepts with the objective to implement the issue of sustainability into treasury management	Knowledge and understanding

Literature suggests that cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. The educator chooses the groups to reflect a diversity of viewpoints, abilities, gender, race, and other characteristics. The groups contain fewer than six students—most likely four. Working with small teams of students contributes to unquestionable advantages to teaching (Domindo 2008).

Cooperative learning techniques have some advantages: (1) promote student learning, (2) increase student retention, (3) enhance student satisfaction with their learning experience, (4) help students develop skills in oral communication, (5) develop students' social skills, (6) promote student self-esteem, (7) help to promote positive race relations, etc.

As Stefaniak (2015) highlights, service-learning is a teaching-learning methodology that combines community service, academic coursework, and work-based experiential learning. In order to be considered as service-learning, the activity should comply with different features (Bringle and Hatcher 2009): (1) it must meet a need in the community, (2) its objectives should be aligned with the course objectives, and (3) it should integrate reflective practice for greater civic engagement and a better understanding of the course content.

Service-learning in Higher Education, *“is undergirded by a commitment to helping a putative homogeneous university student body learn more about themselves and others through engagement with presumed culturally, linguistically, socioeconomically different persons than themselves”* (Gomez et al. 2015). Moreover, service-learning projects can provide students with real-life experiences, so they can provide them with the opportunity to interact with clients and constraints that regularly occur on real-life work.

Service-learning techniques have some benefits for students and the community. For students: (1) makes curriculum relevant to students' lives, (2) clarifies values, (3) promotes community and civic responsibility, (4) develops critical thinking and social skills, (5) fosters social and personal development, (6) enhances student satisfaction with their learning experience, (7) helps students develop skills in oral communication etc. For the Community: (1) provides meaningful services to the community, (2) creates opportunities for community to participate in student learning, (3) builds community awareness of college programs and services, etc.

Previous examining the results, this research should present the limitations of the method. One the one hand, cooperative-learning is not always a successful technique for groups of mixed ability, since low-achieving students become passive and do not contribute to the group. In addition, the conflicts between members of a group can diminish a group's ability to work in a cooperative way. On the other hand, service-learning project could not be aligned with the subject (time and curricula), the teacher expertise, or the students' expectations, factors that affect the effectiveness of this technique.

4 Results

4.1 Survey Results

As we have previously stated, in an initial stage, we were interested in finding out whether the students of business and finance are familiar with the concept of sustainable development, specifically about CSR and SRI, and whether or not they are part of their knowledge, their degree programmes, and in their professional and personal future.

We conducted a field survey with a sample of business and finance students and we analysed three cases—where CSR and SRI were included—in three subjects: (1) Financial Operations Valuation, (2) Operational Auditing and (3) Treasury Management.

Once collected and tabulated the questionnaires, some interesting findings can be remarked. As it is observed in Table 2, there is a high percentage of students who consider important to include social responsibility issues in their degree's subjects. Furthermore, the 83 % of students state that training on ethical or social responsibility knowledge would allow them to perceive that business decisions are imbued with moral and ethical implications.

As Table 3 shows, it is remarkable the high percentage of students that have answered “Don't know” in the questions about socially responsible investment. Only the 42 % have heard about socially responsible investment before. The rate

Table 2 Responses to questions about corporate social responsibility subjects

	Yes (%)	No (%)	DK (%)
Do you consider important to address social responsibility issues in any of your degree's subjects?	73.15	20.81	6.04
Do you consider if students received training on ethical or social responsibility contents, it would allow them to perceive that business decisions are imbued with moral and ethical implications?	83.22	7.38	5.37

Table 3 Responses to questions about socially responsible investment knowledge

	Yes (%)	No (%)	DK (%)
Have you heard about Socially Responsible Investment?	42.74	36.75	20.51
Have you ever hired a financial product Socially Responsible?	11.11	64.10	24.79
Do you know what is ethical banking?	35.04	42.74	22.22
Do you know any international ethical bank?	46.15	0.00	53.85

decreases to 11 % when they are asked if they have ever hired a socially responsible financial product. These figures underscore the lack of knowledge that students have about socially responsible investment.

This lack of knowledge is also evident when they are asked about the ethical banking concept. Most students do not know this concept and they are unaware that exists a wide range of international ethical banks.

4.2 Learning Experiences

Second phase was about reviewing the practical materials used in previous courses in order to adapt them to the introduction of CSR and SRI concepts. One of the most difficult tasks to carry out during this project was the integration of SRI and CSR among the traditional contents of business management in a practical manner.

As discussed earlier, we designed three innovative activities and two learning experiences to show students the role of the sustainable development in the financial markets and in the management of companies. These activities were used in five business subjects: (1) Financial and Bank Management, (2) Sustainable Finance, (3) Financial Operations Valuation, (4) Operational Auditing, and (5) Treasury Management.

Specifically, this study is addressed to: (1) students of the third course of Diploma in Labour Relations (2002 Programme of Study) of UJI; (2) students of the Master in Sustainability and Corporate Social Responsibility, which is offered by UJI and Spanish National University for Distance Education (UNED); and (3) the finance students of UJI.

4.2.1 Financial and Bank Management

It is a second semester optative subject of the third course of Diploma in Labour Relations (2002 Programme of Study), but also an elective subject for other degrees. The main objective of the Financial and Bank Management subject is to provide the students with the basics of financial management techniques, paying special attention to the techniques for investments evaluation, finances management and banking institutions engagement. In this context, the debate surrounding the questions related to SRI and sustainable financials in banking and organizations is considered a very important topic. These concepts were integrated by means of an innovative methodology based on the cooperative learning. The working teams were integrated by three or four students from different grades.

The project developed by the students involved writing an Executive Report about the sustainability of two financial entities (different for each working group) belonging to banking industry—a bank and a savings bank. Specifically, each working team was required to analyse and compare two Sustainability Reports of

banking institutions. In their reports students had to analyse the social and environmental information as well as the traditional economic-financial information.

The results indicate that the students have increased their motivation in the subject, and their comprehension of sustainable finance.

4.2.2 Sustainable Finance

It is a second semester optional subject of the Master in Sustainability and Corporate Social Responsibility. This Master is online, therefore, the Information and Communications Technologies for learning is a transversal subject integrated in the Programme. The basic contents of this subject are aimed at allowing students to identify and anticipate potential risks and points of friction between the economic-financial sphere and the social, environmental and sustainability considerations; to suggest alternatives as possible solutions to the problem; to make decisions autonomously in a context of uncertainty; and to learn the new investing possibilities that bear in mind more criteria than those only related to economic aspects.

By means of a service-learning project, it has been introduced in the subject the debate surrounding the investor's financial needs and investment's impact on society.

In this service learning project, after learning about SRI and studying their local community financial problems and needs, students had to adopt a role as a 'consultant' and they should develop a financial solution. Specifically, they had to create a community investment vehicle to the local community. This proposal gave students experiential opportunities to learn in real world contexts and develop skills of community engagement.

First, students did a personal fieldwork and investigated the financial needs and realities of their local community or certain groups (farmers, people that live in a rural area, women, young people, unemployed, etc.). Second, after the fieldwork, students designed a community investment vehicle to facilitate the social integration and inclusion in the financial system of persons from excluded social categories. The basic issues included in the report were: (1) Contextualization of the problem or need in the community for which it is to design the investment vehicle; (2) Definition of the community investment vehicle; (3) Main characteristics and objectives of the community investment vehicle; (4) Major beneficiaries; and (5) Overall impact on society in economic, social or environmental terms.

The projects developed by students had a high level of quality and consistency, what helped them to internalize the concepts they had developed during the course. The Example 1 shows the main characteristics of the vehicles designed by students, where some of the most important SRI principles can be observed.

Example 1 Main characteristics of community investment vehicle

Characteristics of community investment vehicle	
Objective	To promote sustainable development refinancing micro-entrepreneurs in a local community
Investment policy	Hedge fund characterized by investments in any unlisted securities issued by microfinance institutions or other securities or instruments issued in order to finance the activities of such institutions
Category	<ul style="list-style-type: none"> – Type of fund: hedge fund – Scope of the fund: Spain
Investors	Individual and institutional investors, funds of funds sufficiently aware or sensitive to the concept of socially responsible investment and sustainable development
Structure	<ul style="list-style-type: none"> – ASG/Ethics Committee, with 50 % of independent experts and NGOs – Evaluation criteria: socio-labor, environment and community relations – Investment quarterly post-checks are performed

Students work on real financial problems makes academic learning relevant while simultaneously enhances their social skills, analytical ability, civic and ethical responsibility, self-efficacy, and career development.



Results indicate that the students have increased their motivation in the ‘Sustainable Finance’ subject, and their comprehension of sustainable finance. The students expressed the new methodology made it easier for them to develop some interpersonal skills such as reasoning, critical reflection, problem solving, public speaking and others, as well as personal qualities such as responsibility and integrity.

4.2.3 Financial Operations Valuation

It is an optional subject in the fourth course of Finance and Accounting Degree. The concern about social, governance and environmental aspects was considered in different lessons, introducing a sustainable profile in questions such as project finance, private equity assessment, or risks analysis. The students’ perception about the importance of the integration of environmental, social and governance aspects into the business management traditional models was generally positive. They expressed their opinion in an activity specifically designed for this project, analysing an article about de financial profession in the future (Example 2).

The most part of the students agree with the necessity of learning in sustainable business management tools, especially those applied to financial markets and banks activities and products.

Example 2 Example of activity




Task

Lesson2:

Financial valuation of market operations

Evaluable activity(2)

"The Financial Future"




Critical commentary of the article:

<http://www.expansion.com/2013/09/24/empresadores-empiezo/mecade-laberal/1380012398.html>

You must make a brief summary of the abovementioned text

Top score 0.4 puntos

Deadline: 11st October


Evaluation

Area/rating	Weight rating of each area on the note of the activity	Incorrect (between 0 and 4.9 points)	Correct (between 5 and 8 points)	Excellent (between 8.1 and 10 points)
Drafting	10%	There are numerous errors in grammar. Paragraphs are not well organized.	Almost no errors in grammar, spelling or punctuation. Most paragraphs are well organized.	No errors in grammar, spelling or punctuation. The paragraph structure is clear, logical and well organized.
Understanding of the subject of the article	40%	The student did not understand the topic discussed in the article.	Students understand the main points covered in the article.	The student clearly understood the issue addressed in the article.
Reflection on the theme	50%	The supplied arguments are unconnected with the main issues and the topics of the subject.	Most of the arguments were linked to major issues and organized in a logical way and are related to the theme of the subject manner.	All arguments were linked to major issues and organized in a logical way and are related to the theme of the subject manner.
	100%			

4.2.4 Operational Auditing

It is an optional subject in the fourth course of Finance and Accounting Degree. This subject addresses corporate governance processes, risk management and internal control mechanisms. Concepts related to sustainability and CSR were integrated in the different lessons of the subject. Moreover, the students presented a task where they had to analyse recent business failures and identify three weaknesses related to the management process. A large number of students concluded that important factors of the business failures had been a lack of analysis, assessment and control of financial and extra-financial variables such corporate governance, social and environmental variables, and a lack of transparency in the information systems of the firm.

As a result, the students understood the relationships between operational auditing and sustainability and identified several weaknesses in the management systems related to CSR.

4.2.5 Treasury Management

It is an optional subject in the fourth course of Finance and Accounting Degree. Topics covered include issues such as treasury functions, treasury performance measurement, liquidity management systems and controls. It was devoted some time during the classes to introduce the CSR and SRI concepts with the objective to implement the issue of sustainability into treasury management. Moreover, students had available additional documents to incorporate the concept of sustainability into treasury management in small and medium enterprises (SMEs). The main objective of these documents was to show the necessity that this business area engages in long-term sustainable development in the companies through practical examples.

As a result, the students understood the importance of implementing CSR policies in all business areas across the companies.

5 Conclusion

Achieving sustainable development will not be possible without the effective integration of education for ESD at all educational levels. The introduction in Higher Education teaching programs a debate around issues of sustainability and social responsibility in organizations may not necessarily involve changing the curriculum, it may in some cases involve minor adaptation, or different ways of approaching issues.

In this context, this paper presents successful learning experiences to introduce the concept of sustainability in the area of business studies, and to promote the university business students' professional development in a more responsible way. Consequently, this study provides university educators with tools which allow them to introduce in the teaching programs a debate around issues of sustainability and social responsibility in organizations related to financial management.

The above mentioned experiences can be applied in all subjects included in the area of Accounting and Finance. We have tried to provide learning resources in terms of management organizations within the parameters of sustainability and corporate social responsibility, in addition to the traditional economic and financial vision that students acquire in studying financial issues. In a globalized, complex and changing environment, the management of information helps to minimize risks, and manage the organization's relations with its stakeholders under a triple economic, social and environmental dimension could be framed within that integrated risk management. Therefore, as a result of experience, we hope to have contributed to the personal and professional development of students.

The main lessons of this research bring knowledge about the understanding of the sustainability concept in a high education context. Moreover, this paper offers some guidelines that could be used by Higher Education Institutions, in order to introduce the sustainability concept in the business curricula; and provide some resources that support ESD professional development of university educators.

From the experience gained through the activities of this project, we believe that it will be interesting to pose a future educational innovation project in which some of the methodological and formal aspects observed in the teaching of other subjects are implemented. For example, teaching methodologies related to cooperative learning would not only be of great interest to the teaching of such issues, but also would provide an approach fully consistent with CSR management.

However, the incorporation of aspects-related to the concepts of CSR, SRI and sustainability in Spanish Higher Education is a slow and gradual process due to the inflexibility of the Spanish Education System. Further tools and experiences are clearly needed for promoting sustainable development in Higher Education.

This study opens new questions that can be addressed in future research. First, future studies could go in depth into the factors of universities that affect the progress towards sustainable development. Second, future research may extend the initial analysis considering the teachers' perceptions on CSR and sustainability. Third, the learning experiences presented in this study may be replicated in other degrees and areas of knowledge since sustainability and CSR are interdisciplinary concepts.

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