European Conference on Curriculum Studies

Future Directions: Uncertainty and Possibility

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EDITORS

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Future Directions:
Uncertainty and Possibility

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Curriculum and Social Responsibility: a comparative study of perceptions of engineering students from four universities


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Abstract

In a time when concerns about sustainability are being discussed on a global scale, such as the Rio +20 last year, it is important to discuss Social Responsibility (SR) in Higher Education, because Institutions of Higher Education train the coming generations of citizens and have the expertise in all fields of research (CRE-COPERNICUS, 1994 cited by Wright, 2004). We consider that Universities have responsibilities in contributing to incorporation of values related to Social Responsibility, in framing the curriculum and extra-curricular activities.

The field of engineering is a key field to creating a sustainable future, because it’s graduated have a major impact in environmental, economic and social terms.

The World Business Council for Sustainable Development (WBCSD), since its beginning in 1995, faces the challenges of sustainable development based on three inseparable pillars: generation of economic wealth, environmental improvement and social responsibility, the third strongly present in the international political agenda (Holmes & Watts, 2003). Hence, the relevance of the present study.

The purpose of this study is to compare perceptions of engineering students from four universities - Minho (Portugal), Coruña (Spain) and Aguascalientes and Guanajuato (Mexico) about the presence of SR at the University and in the respective degree program. These institutions collaborate in an international research project on Social Responsibility in Higher Education that aims to contribute to a comparison of SR existing perspectives and curriculum innovation in various professional areas, along with contributing to the Ibero-American connections.

1 Introduction

This study is part of an international research project involving four universities and three countries, Minho (Portugal), Coruña (Spain) and Aguascalientes and Guanajuato (Mexico).

The research project focuses on representations of the three main actors in the university setting on the concept and practice of SR in University: (I) Students, (II) Professors, and (III) University Directors. In an attempt to have a broader picture of these representations, students and teachers from four different training areas were involved: (I) Arts, (II) Education, (III) Engineering and Technology; and, (IV) Economics and Management (van Hattum-Janssen, N.; Sánchez Fernández, M. D.; Caires, S.; Kahn, S., 2012). In this study, the emphasis is on students’ perspectives of Engineering.

2 Curriculum and Social Responsibility

The interest in Corporate Social Responsibility (CSR) appears associated with progressive changes in the socioeconomic panorama in the light of which companies begin to redeem the human values and start to take on the challenges of the internationalization of capital, labor and processes of trade liberalization (Sánchez-Fernández, 2011).
In 2001, the Green Paper of the European Union referred to the concept of CSR in its broadest sense, highlighting the need for companies to contribute to the improvement of society and of the environment. The concept of CSR is to be interpreted more broadly, an orientation that appears reflected in the works of authors such as Martin at al. (2008), which identify CSR as a phenomenon of business management, showing, however, concerns about all corporate actions that might affect third parties, due to the factored approach to economic interests. In the same line of thought, Gessa et al (2008) argue that the company should take an active, participatory and proactive attitude in the development of society and to meet the expectations of stakeholders (as cited in Sánchez-Fernández, 2012).

CSR refers to relational aspects between a company or organization and the social environment in which it operates (Sánchez-Fernández, 2011). However, if the ideas and definitions presented by various authors allow us to realize the importance and scope of this concept, the fact that we are in presence of a relational concept prevents the creation of a single definition since there is no consensus to support it (Sánchez-Fernández, 2011). It is therefore necessary to clarify what we mean when we use this concept.

In the current study we stand on the view that corporate sustainability and CSR refer to corporate activities - voluntary by definition - demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders. This is a broad definition of corporate sustainability and CSR (van Marrewijn, 2003), identical to the one recommended by the World Business Council for Sustainable Development (WBCSD), since its foundation in 1995. According to this definition, the answers to the challenges of sustainable development are based on three fundamental and interrelated pillars: the generation of economic wealth, environmental improvement and social responsibility, being the third pillar firmly present in the international political agenda (Holmes & Watts, 2000).

Another aspect worth noting is that sustainability, for a long time considered a concern associated to the business sphere, has being, lately, the focus of attention inside Higher Education institutions and giving place to the concept of Higher Education Social Responsibility (HESR) and/or Sustainability in Higher Education (SHE). It is now widely accepted the idea that all HE students have to be trained according to sustainability criteria and values, so that, in their future citizenship and professional activities, they can carry out socially responsible practices (Geli, Junyent & Sanches, 2003; Tilbury, 2004 cited in Junient & Ciurana, 2008).

Many key issues were highlighted and emerged in statements of SHE, since the 90s, including the ethical and moral responsibility of the HE institutions to contribute to local, regional and global levels of sustainability.

Multiple declarations of international organizations call attention to the need for HE institutions to promote research that lead to sustainability. For example, Principle 4 of the Kyoto Agreement argues that HE institutions should promote research and action for sustainable development (Wright, 2004), i.e. HE institutions must become models of sustainability in their own communities, encouraging the adoption of sustainable practices, ecological literacy and the development of interdisciplinary curricula and research endeavors on sustainability, creating partnerships and cooperation with governmental, non-governmental organizations and industry, as well as with other HE institutions (Wright, 2004). According to Junient and Ciurana (2008), only then HE will play a significant role in the backing up of the shift to a sustainable future.

However, if HE institutions "awareness of social, economical and ecological aspects of their contacts with students, parents, suppliers, companies and society in general is important" (van Hattum-Janssen, N.; Sánchez Fernández, M. D.; Caires, S.; Kahn, S., 2012, p. 330), this awareness requires the implementation of a curriculum concept substantially different from what has prevailed in the school systems and that educational practices assume a new meaning (Morgado, 2003). One change, according to Goodson (2007), involves abandoning the notions of prescriptive curriculum and of learning content-based curriculum in favor of a more open and flexible one - the curriculum narrative - which, without neglecting the value of knowledge, helps each individual to learn to be in the social context in which they live, a curriculum that allows us to understand that "the experiences of people are dialectically linked to the social relations of the society in which they are embedded" (Goodson, 2008, p. 25) and should, therefore, be an integral part of their learning.

Furthermore, to reorient education for sustainable development is needed "a new way of thinking" (Freire, 2007, p. 147). Education for sustainable development is a dynamic concept that seeks to integrate the whole society in order to get people to take responsibility for creating a sustainable future. To educate for sustainability and science is the essential vehicle to fulfill this purpose (Freire, 2007). But, for this new way of thinking to arise, it is important that the curriculum development projects are guaranteed by multidisciplinary research teams, similar to the ones found in the research group that prepared this text. In any educational project, the curriculum is a privilege instrument that, in articulation and completing of its core elements (objectives, contents, methods, resources and assessment components) constitutes itself as a guideline for conducting learning experiences resulting from
interaction between students and teachers in a particular context (Pacheco, 2005) and should, therefore, involve different areas of knowledge in an interdisciplinary logic.

It was based on the previous assumptions that the present group of researchers considered that Engineering Education is of extreme importance. The intrinsic corporate agendas addressing issues such as efficient land use and infrastructures, microclimates, health, transport and energy use (UNESCO, 2010) and the presence of engineers in various areas of activity, transversely to the whole society, make it inevitable. Therefore, we reiterate that the SR is critical to creating a sustainable future and engineers are privileged agents in economic, social and environmental concerns. However, there are still many steps to be taken at the level of educational improvements in the engineering curriculum in order to overcome some of the contemporary challenges that our society faces (Pritchard & Baillie, 2006, p. 556). It is important; therefore, to identify the point of view of the actors involved in the process of Engineering Education, namely the students, in order to, in a later stage, design more appropriate curriculum development proposals.

3 Methodology

Regarding the collection of data from students, we opted for the methodology of Focus Groups (FG) because it allows to collect information about the perceptions, attitudes, feelings and / or opinions and knowledge about a particular topic (Gibbs, 1997; Peterson & Barron, 2007; Peterson-Sweeney, 2005; Rodriguez, Schwartz, Lahman & Geist, 2011), revealing itself as a very useful methodology in the Social Sciences field.

Usually, research using FG is defined as a way to collect qualitative data that essentially involves a small number of people in focused informal discussions or a set of questions in a particular theme (Wilkinson, 2004; cited by Onwuegbuzie, Dickinson, Wendy Leech & Zoran, 2009). The FG are, in the opinion of the research team, the most appropriate methodology for promoting the sharing and viewing of information between participants, sharing that this is not possible in individual interviews.

3.1 Participants

This study includes a total of 28 Engineering students of the 4 Universities / 3 countries - University of Minho (UM), Portugal; University of Coruña (UC), Spain, and; Autonomous University of Aguascalientes (UA) and University of Guanajuato (UG), Mexico - integrated in 4 FG.

The division of the participants by university is: 7 students of UM; 10 students of UC; 7 students of UA and 4 students of UG. All these students attend higher education, and, in these cases, a Bachelor’s Degree or Master.

3.2 Instruments

In order to identify the SR perspectives, views and experiences of students of Engineering, a FG interview guide was developed for students of Engineering of the four universities (n=4).

All FG were conducted by a team of two people: a moderator and an assistant moderator and were recorded on audio tape recorder. The FG script-based was adapted to the students’ mother tongue (not changing in any way the content) and had fifteen basic questions: 5 on familiarization with the concept, 5 about the known practices of SR, 4 about the SR in the university context and 1 about the SR in the future professional context.

3.3 Procedure

For the realization of the FG, the moderator contacted the Degree Program Director in order to get contacts of students. In some cases send a general email to all students and in other cases spoke with the representative of the class or the core of students to see how many students agreed to participate.
Initially the moderator made up a contextualization of the study and a clarification of the goals of the study. The voluntary and confidential nature of the student participation was emphasized. Anonymity was guaranteed and was reinforced with the students.

During the FG, the moderator was responsible for facilitating the discussion, encouraging students to express their ideas and take notes of potential issues to become new questions. The assistant moderator was responsible for taking notes, recording audio and check later the data recordings (Kruger & Casei, 2000 cited in van Hattum-Janssen, N.; Sánchez Fernández, M. D.; Caires, S.; Kahn, S., 2012). In the end, the team proceeded to thank all the students for their participation in this study.

4 Results and discussion

In this paper, we will only focus on the contact that students had with SR and the presence of SR in university/degree program.

Before presenting the data, we consider important to explain how we did the categorization of data. We create a table organized by university and by questions and, according to the responses obtained; we create a categorization of responses by topic or number.

Table 1: Data collected from engineering students

<table>
<thead>
<tr>
<th>University / Question</th>
<th>Corunã</th>
<th>Minho</th>
<th>Guanajuato</th>
<th>Aguascalientes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever had contact with the concept of social responsibility?</td>
<td>No students</td>
<td>3 students</td>
<td>No students</td>
<td>All students</td>
</tr>
<tr>
<td>Does it make sense to develop a project that meets the social responsibility along your degree programme?</td>
<td>Yes – 1 student</td>
<td>Yes – all students</td>
<td>Yes – all students</td>
<td>Yes – all students</td>
</tr>
<tr>
<td>What is the perception that you have of the presence of social responsibility in your university?</td>
<td>Donations</td>
<td>Scholarships Collecting of goods for the underprivileged Separating of waste</td>
<td>Social service Professional service</td>
<td>Humanistic training program Social services Water treatment plan Activities with social causes Separation of garbage Workshops that inspire students to support</td>
</tr>
<tr>
<td>What do you consider your university could do more in this area (SR in the university)?</td>
<td>Question not included</td>
<td>More openness in political terms Spaces for debate and reflection to economics, sociology, etc. Development of students in motherhood questions</td>
<td>More environmental support programs (reforestation) Social programs (gathering food, clothes, etc.)</td>
<td>Scholarships Transportation Incentives Resources Fundraising projects</td>
</tr>
</tbody>
</table>
The data contained in Table 1 relate to the views expressed by students who participated in the FG, conducted in the four universities involved in the study. Since this is a first approach to this issue, the data collected show that, on one hand, this is a relatively recent issue and, given its relevance, must, on the other hand, become part of the discussions that take place within the institutions of higher education.

Asked if they had ever had contact with the RS concept, we found that the majority of students, have heard or haven’t heard about SR, had not thought about it and hadn’t participated in any debate on this topic. Exceptions to three UM students and all students who participated in the FG of UA, where everyone claims to know the concept. It should also be noted that one of UM students claimed to have been aware of this concept through a Political Party, specifically in the development of activities within a group Youth Caucus. In the case of UA students, it isn’t surprising that the concept is approached in the university context, since it is a mandatory subject of curricula related to environmental issues, which has leveraged its knowledge.

On the second issue, related to the fact that students consider or not to make sense to develop a project that meets the SR along the degree programme, a significant majority of young people consider positive this hypothesis. In the opinion of these students, the university, as an entity of scientific and cultural training, should also pay attention to social issues, preparing individuals for sustainable and sustained future interventions.

There is curious that, although students from UM, UC and AU consider beneficial to include in their course a project to sensitized them to the importance of SR, there are 9 students from UC that affirm that doesn’t make sense a SR project in their degree program, especially if we consider that, in the previous question, all students of the university had never claimed to have had contact with the subject.

Regarding the perception that students have of their university activities that enliven and that can contribute to improving knowledge and practices in this area, all gave valid examples, such as the existence of a kindergarten integrated into university, scholarships, the collection of goods for the underprivileged, the development of devices for the treatment of water, awareness of the need for waste separation, among others. It should be noted that, while students from UM, UC and AU gave only examples of the social and economic forum, the students of UA gave several examples of an environmental nature, which shows the scope of the topic.

For other types of SR practices that could be developed in their university, students came forward with several examples, highlighting the need for greater political openness on the part of the institution, creating spaces for debate on issues-oriented ethical, social and economic, the existence of a good transport network, scholarships and study materials, developing fundraising projects, i.e., a set of concerns that contribute to an effective SR structure.

Finally, in the stage of conclusion of the interviews, students were asked to comment on the importance of including in their degree program, content addressing the SR. All UM, UC and AU students considered this possibility very fruitful, except students of UC, where only one student refer that is important, which reinforces the position that these students had taken in the previous questions.

5 Conclusion

By way of final balance of this stage of the project, over which we conducted an exploratory study on the perceptions of students about SR and practices developed in universities, is important to emphasize four aspects that seem relevant.

Firstly, is the fact that the SR concept is relatively unknown in the four universities who participated in the study. In all cases, the students do not demonstrate that they have appropriate this concept. Only after a brief explanation from interviewers, they could give examples of SR at the university and / or the surrounding community.

Secondly, the practices that the university they attend develops, or could develop, within the SR. Students identified some practices that are develop in SR context and a number of conditions that, although they may
contribute to the development of RS in the institutions they attend, not directly depend on students, but the ministries that oversee, such as network transport or the granting of scholarships.

Thirdly, the fact that a significant majority of students believe that it makes sense to incorporate thematic and / or procedures of RS in the degree program.

Finally, it appears that, in relation to the importance of SR, there are no significant differences regarding the country or the specific context where each university is inserted. We believe that the case of UC is not a position of disagreement; it is a punctual case that reveals the ignorance of students about the benefits that can result from an effective commitment of universities in strengthening and / or development of these themes. This is an issue to be clarified in future studies.

What does not raise controversy is the role that universities can play in educating interventional citizens with sense of responsibility, whether scientific or cultural, whether in economic terms, and also in social terms. For this to happen, it is necessary that Universities contribute to the promotion of values and the development of skills and competencies that deepen the social commitment of students with a more solidarity, more just, i.e., more democratic future.

References:


