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## EDUCATION FOR SUSTAINABILITY: CURRENT STATUS, PROSPECTS, AND DIRECTIONS

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### *Abstract*

Sustainability is a complex concept that is addressed by most companies, and is the direction of their development. Culture and education for sustainable development must start from higher education. At the level of higher education, the presence of sustainability subjects was mainly assessed in the curricula of study and also the understanding of the concept among students. In Romania these studies are not defined in depth. Also a comparative analysis of students' knowledge and understanding of the concept in business (after graduating higher education) has yet to be made. The purpose of this paper is to highlight the current level of education for students and the business environment based on the sustainability principles. The first objective of this paper was to review and present the previous research on Education for Sustainable Development (ESD). The second objective was to identify and assess the current level of ESD in Romania.



**Keywords:** Higher education, sustainable development, behavior change, attitude.

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## 1. Introduction

Traditionally companies have no concerns beyond those strictly related to business activity, all resource allocations being designed to achieve their economic objectives and reflected ultimately in profit. Lately this business behaviour began to change, with the focus on sustainability and aligning with European requirements on environmental, social and economic dimensions. In recent studies (Baleanu et al., 2014; Viegas et al., 2016) it is pointed out that companies are starting to become increasingly involved in the sustainable development and understand the meaning of the concept in its entirety.

An important role in promoting the concept of sustainability is held by institutions of higher education and especially at the post-graduate level (Baleanu et al., 2010; Moraru et al., 2014). In the case when the post-graduate students perceive and understand what the concept is, then sustainability reporting in companies where they work or will work has no longer any barrier.

This paper aims to identify the current level of involvement in the sustainable development of communities in Romania and assess the level of understanding of the concept for students in higher education.

## 2. Problem Statement

A growing number of organizations seeking to develop sustainable operations and align with international requirements. Moreover, expectations that long-term profitability is directly proportional to social responsibility and environmental protection, are advancing. Involvement in sustainability reporting helps organizations to set goals, to measure performance and manage change in order to achieve sustainable operations. A sustainability report submits information on the impact of an organization, be it positive or negative, on the environment, society and economy (Mocan et al., 2015). Involvement in sustainability reporting contributes to long-term development of the organization, but also to improving the image in front of the stakeholders. The reporting environment can be chosen by the organization. Electronic or online reports and reports on paper are two appropriate media for reporting. Organizations can choose to use a combination of web and reports on paper or use only one medium. From this perspective, researching the awareness and adoption of this concept is helpful. To investigate the awareness and adoption, the research is based on the degree of learning of the concept of sustainable development among undergraduate and graduate students, and among the companies in Romania.

So, the students represent the human resource that will contribute to business development (Popa et al., 2015; Vassigh et al., 2014). The students do not have the basic elements of education for sustainable development (ESD). A number of studies highlight the fact that students do not have the sustainability knowledge (Viegas et al., 2016; Chaiwichit, 2016). In Barth's and Rieckmann study in 2012, it is noted that students should acquire skills for sustainable living and be able to understand the link between interaction and consequences over a long period of time. In 2013, Boutou confirms that future professionals must be prepared from the perspective of sustainability to be competitive and be

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hired easily by companies. In the studies Godemann et al. (2014), Amaral et al. (2015), and Haskova et al. (2016) it is shown the important role that sustainable development plays in the curriculum of the students.

Therefore, knowledge on sustainable development is needed among students. With this purpose a questionnaire was developed that was first applied to students in higher education to identify the level of knowledge of the concept. The second survey was carried out for companies in Romania, being applied to identify the involvement of these companies in sustainable development. Therefore, the research is based on two directions:

- The questionnaire survey applied in academia, and
- The questionnaire survey applied to business.

## 3. Research Questions

This research aims to answer the questions: "What are the sustainability principles to be followed? What are the future directions in terms of ESD?", and to highlight the degree to which human resource and companies are interested in these principles and directions of development.

### 3.1. Sustainability Principles

The involvement in sustainable development is a concern for many companies in Romania as there is little understanding of how it is perceived by companies and by human resource. Among the basic principles of sustainable development set forth in the Rio Declaration on Environment and Development (UNEP, 2016) are:

- Development of the companies must involve not only concern for the environment, it must involve respect for society and the balance of financial resources.
- Environmental protection must be an integral part of development processes and no individual activities should be taken for its protection. Companies must equitably support poverty eradication and gender equality in the workplace.
- Companies and businesses should meet most people's needs in a balanced way, with no differences between human resources.
- Environmental issues need to be approached by involving all stakeholders.
- There must be international cooperation to promote an open international economic system that will lead to economic growth and sustainable development in all countries, with no differences.
- The involvement of women and youth, courage, creativity and knowledge of people are the dimensions that are supporting the sustainable development.

### 3.2. The directions of sustainable development

In order to assess the degree of involvement in the sustainable development of a number of organizations conduct evaluations performed without the use of international reporting standard. There is

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no legislation to impose sustainability reporting under a standardized form, so due to the complexity of international reporting many organizations choose a simple evaluation of all activities. According to the last version of sustainable development reporting, Global Report Initiative - GRI G4, the main development directions are presented below in Table 01:

**Table 01.** Responsibilities and issues related to sustainability reporting

| Responsibility | Aspects | Dimensions |
|---|---|---|
| Economic | | Economic performance, market presence<br>Indirect economic impact, public procurement practices |
| Social | Labour practices and decent work | Employees, labour / relations management, health and safety at the workplace, training and education, diversity and equal opportunities in the human resources, Complaint resolution mechanisms of working practices |
| | Human rights | Forced labour, labour practices, evaluating various human rights, Complaint resolution mechanisms for human rights |
| | Society | The rights of local communities, business behaviour, Complaint resolution mechanisms of society |
| | Production responsibility | Conformity of production processes, health and safety of customers, marketing, confidentiality |
| Environment | | Materials, energy, water, biodiversity, emissions, waste, Products and Services, Compliance, Transportation, Assembly, suppliers impact on the environment, environmental related complaints mechanisms |

## 4. Purpose of the Study

The purpose of this paper is to highlight the current level of education for students and the business environment on the sustainability principles. The first objective of this paper was to review and present the previous research on ESD. The second objective was to identify and assess the current level of ESD in Romania. Based on the principles and directions of sustainable development, this research used two questionnaires that were applied among students (600 students) and companies in Romania. (100 companies)

## 5. Research Methods

Focus groups were conducted in this study to identify the current level of education in terms of sustainability. For the business environment a questionnaire was applied to identify the level of knowledge of this process of sustainable development.

### 5.1. The questionnaire survey applied to the academic environment

To assess the level of education in terms of sustainability in academia a questionnaire survey was used, emphasizing the closed questions due to the complexity of the concept. The questionnaire is structured in three main directions:

- Assessment of subjects in the curriculum - preferences, learning styles and teaching methods.
- Knowledge of sustainability concept - the degree of perception of this complex concept.

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- Students' adaptability to business requirements, desire for knowledge and involvement in of the students in organizations.

### 5.2. The questionnaire survey applied to companies in Romania

The research directions of this questionnaire are:

- Company identification through various elements - to outline the profile of the organization.
- Risk management in organizations - sustainable development involves risk assessment because it is present in every activity and there is no durability without hazard and threats identification.
- Standardization and globalization - sustainability leads to standardization of processes and the implementation of international standards.
- Sustainability - perception and implementation of sustainability principles and directions.

The entire research design is shown in Figure 01 below, starting from directions and theoretical principles, evaluating the perception of sustainability in business and among students and directions are obtained to be followed for global sustainable development.

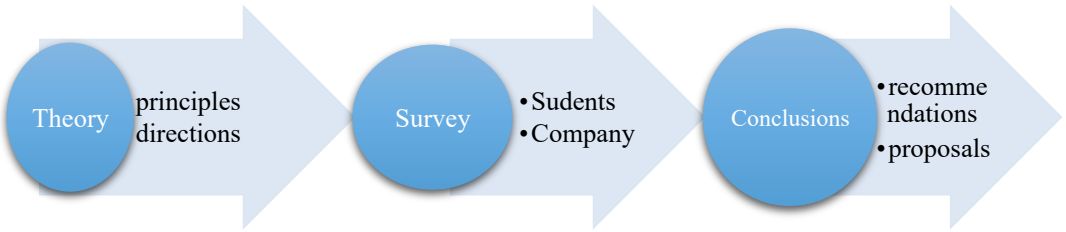


**Figure 01.** Research structure

## 6. Findings

The study outlines that inclusion of courses on sustainable development contributes to the development of a sustainable business, sustainable companies and of sustainable jobs. The results of applying the questionnaires are collated below.

### 6.1. Interpretation of results obtained in academia

From the questionnaire applied to academia some information was obtained that is consistent with the international direction. As underlined by Barth and Rieckmann (2012), students should possess basic information on sustainability because knowledge in this area is minimal. The centralisation of results obtained are presented in Table 2.

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**Table 02.** The systematization of the results obtained in academia

| Area | The implication of question | Affirmation answer (Yes) |
|---|---|---|
| Evaluation of curriculum subjects | Interactive teaching-learning methods | 39% Method for problem solving |
| | Learning style | 87% defined by visual style, 28.2% auditory style |
| | economic subjects | 33% |
| | subjects on environmental protection | 10% |
| | CSR subjects | No |
| Knowledge of sustainability concept | Concept definition | 13% |
| | Sustainability principles | 2% |
| Adaptability of students to the needs of business | The degree of employability | 18% |
| | Application of theoretical knowledge in the workplace | 52% |
| | Involvement in volunteering work | 32% |
| | Study visits in companies | 75% |

After analysing the results obtained the following can highlighted:

- 39% of respondents prefer as the method for problem solving the stimulating of creativity and only 15% prefer individual study.

  In terms of typology of teachers, 68% of respondents want the teacher to take the role of initiator in teaching.
- Of the respondents 87% are defined by the visual style, 28.2% the auditory style, 7.7% tactical and 2.6% kinaesthetic.
- In terms of study subjects, economic subjects are covering 33% of the curriculum, and those relating to environmental and social practices are not covered very well.
- From the perspective of sustainability, very few respondents were able to define the concept of sustainability, and its implications have not been identified.
- 18% of students are employed (those in final years) and 52% apply the theoretical knowledge in the workplace.
- Study visits are present starting with the 2$^{nd}$ year of study, being performed annually, together with internships.

### 6.2. Interpretation of results obtained in business

After analysing the results obtained after applying the questionnaire to 100 companies in Romania it is seen that most know the concept of sustainability and perform various activities in this direction. The results are summarized in Table 03 and are discussed below.

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**Table 03.** The systematization of results obtained in business

| Area | The implication of question | Affirmation answer (Yes) |
|---|---|---|
| Risk management in organizations | The existence of risk manager | 52% |
| | Risk management | 91% |
| | risk retention | 32% |
| | risk transfer | 68% |
| Standardization and globalization | The implementation of at least one standard (ISO 9000, ISO 14000, ISO 26000, ISO 31000) | 92% |
| | Involvement in international efforts on globalization | 61% |
| Sustainability | Knowing the concept of sustainability | 75% |
| | What are the dimensions of sustainability | 69% |
| | Carrying out the actions to protect the environment | 96% |
| | Carrying out the actions to support society | 100% |
| | Cost-benefit analyses | 92% |
| | sustainability reporting | 85% |
| | Sustainability reporting using GRI | 43% |

From the results obtained from the business environment on the 100 companies it is observed that:

- In 52% of these there is a risk manager and 91% of them consider as important the risk management for the organization.
- 32% of organizations bear the financial consequences directly, using borrowed or own funds, and 68% transfer the risk, that means that they have an insurance contract.
- Most companies have implemented at least the quality standard, registering a proportion of 92%
- 61% of the organizations are involved in international efforts that lead to global development and are contributing directly to the development of the company.
- From the perspective of sustainability, it is noticed that lately the concept of sustainability is fully understood by most organizations, registering 75% percent.
- Sustainability defining was done correctly by 69%. They correctly identified the 3 responsibilities of sustainability: economic, social and environmental.
- Over 90% of respondents develop activities to protect the environment and all companies support the society.
- Financial analyses are performed mainly at the end of the year, and costs and benefits analysis is performed by most companies, i.e. 92%.
- Reporting sustainability is achieved by 85% of companies and only 43% of them use the Global Report Initiatives - GRI.

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## 7. Conclusion

Finally, it can be concluded that inclusion of materials on sustainable development contributes to the development of a sustainable environment and sustainable businesses. The relationship between education and sustainable development is a directly proportional one.

From the analysis conducted in this paper, in Romania, the following can be concluded:

- The concept of sustainability is perceived by most companies, but reporting is not realized in standardized form. This could be complemented by a series of courses that can be achieved in the years of study.
- Respect for the environment and society can be shaped even during the years of study so that when the student is hired this mind set is already intact.
- Various financial analyses are performed at the superficial level or only on the final financial results, which could be supplemented by courses in academia.
- To apply the theoretical knowledge as many agreements with companies should be concluded to increase employability percentage in final year of study.
- Introducing new trends and directions concerning the development of the business environment.

In conclusion, it can be said that the business environment in Romania is in continuous development and is aligning with international requirements. The students are interested in business requirements and prefer to be employed after graduation. This is supported also by the idea that during the years of study, hiring students is done without the necessary qualifications and thus the pay is low.

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