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EDUCATION ROLE IN SUPPORTING CHANGE TOWARDS SUSTAINABLE DEVELOPMENT: RESEARCH ON ROMANIAN UNIVERSITIES

Society is still in search for solutions leading to sustainable development, thus education for sustainable development aims, through knowledge and skills, to change human behaviour towards a more sustainable one in all aspects of socioeconomic life. In this context, universities must play a role of models and leaders in supporting, by all specific ways (strategic commitment, cross-disciplinary approach, integrated curriculum, scientific and applied research, active involvement in community life, university campus etc.), the change of the current thinking and acting paradigm. Following some landmarks in literature regarding the factors of successful change towards sustainability, we propose a research, using as methodology the thematic content analysis, on how Romanian universities commit and act in supporting change for sustainability.

Keywords: education for sustainable development; university role; factors of successful change; thematic content analysis.

JEL Classification: I25.

Міхаела Кардош

РОЛЬ ОСВІТИ В ПІДТРИМЦІ ЗМІН НА ШЛЯХУ ДО СТІЙКОГО РОЗВИТКУ: ДОСЛІДЖЕННЯ НА ПРИКЛАДІ РУМУНСЬКИХ УНІВЕРСИТЕТІВ

У статті стверджено, що суспільство все ще знаходиться у пошуках рішень на шляху до стійкого розвитку. Освіта у сфері стійкого розвитку дозволить шляхом знань і умінь спрямувати суспільну поведінку до стійкого розвитку у всіх аспектах соціально-економічного життя. У даному контексті університети повинні грати роль моделей і лідерів з підтримки змін мислення і образу дій різними методами (стратегічне залучення, міждисциплінарний підхід, інтегрована навчальна програма, науковий і прикладний підхід, активна участь у суспільному житті тощо). На основі деяких висновків у попередніх роботах, присвячених чинникам стійкого розвитку, запропоновано дослідження діяльності румунських університетів в даній області. Як методологію використано тематичний контентний аналіз.

Ключові слова: освіта у сфері стійкого розвитку; роль університетів; чинники успішних змін; тематичний контентний аналіз.

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РОЛЬ ОБРАЗОВАНИЯ В ПОДДЕРЖКЕ ИЗМЕНЕНИЙ НА ПУТИ К УСТОЙЧИВОМУ РАЗВИТИЮ: ИССЛЕДОВАНИЕ НА ПРИМЕРЕ РУМЫНСКИХ УНИВЕРСИТЕТОВ

В статье утверждается, что общество все еще находится в поисках решений на пути к устойчивому развитию. Образование в сфере устойчивого развития позволит путем знаний и умений направить общественное поведение на устойчивое развитие во всех аспектах социально-экономической жизни. В данном контексте университеты должны играть роль моделей и лидеров по поддержке изменений мышления и образа действий различными методами (стратегическое вовлечение, междисциплинарный

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подход, интегрированная учебная программа, научный и прикладной подход, активное участие в общественной жизни и т. д.). На основе некоторых выводов в предыдущих работах, посвященных факторам ориентирования на устойчивое развитие, автор статьи предлагает исследование деятельности румынских университетов в данной области. В качестве методологии используется тематический контентный анализ.

Ключевые слова: образование в сфере устойчивого развития; роль университетов; факторы успешных изменений; тематический контентный анализ.

Introduction. "We can't solve problems by using the same kind of thinking we used when we created them" (Albert Einstein).

Putting this statement in terms of sustainability, we could say that unsustainable trends and situations still present in society are caused by how humans think and act and how societal structures are set up. Therefore, to move towards a more sustainable society, we need to change our thinking and acting paradigm. In this generous context of analysis, we bring into discussion the role of education for sustainable development, focusing on how the academic environment addresses and acts in this sense.

The paper is structured in two parts. The first part is dedicated to present some theoretical considerations regarding education for sustainable development and factors of successful change towards a sustainable behaviour. The second part approaches a research about the role played by Romanian universities in supporting change towards sustainability, using as methodology the thematic content analysis. The paper ends with a section of conclusions regarding the main ideas of the empirical research, with implications for further research.

1. Literature Review. Sustainable development is today a landmark of a world in change, a subject of great interest for researchers and policy makers, aiming to respond to permanent changes and challenges in society. The concept of sustainable development has been approached from different theoretical, methodological and practical perspectives, requiring problems to be understood and responses to be articulated in order to provide an optimal interaction of economic, human, environmental and technological systems, to assure "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987). Sustainable development has also become a global strategy, with clear objectives, principles, action plans and precise responsibilities, from local to global, but it is not enough to have formal institutions, to put rules on paper and wait for change in the direction of sustainable development, as with all the ways sustainable development can be defined in goals, indicators, values and practice (Keates and al., 2005), it is mainly about individual values. Eventually, sustainable development depends on people, on how they respond and react. It takes a long time and it is a complex process to change people in mentality, competences and actions, as people need relevant information in forms they can understand and use, as well as skills and motivation which facilitate change (Dalal-Clayton and Bass, 2002). The great challenge is to change the value system underlying the global economy, so as to make it compatible with the demands of human dignity and ecological sustainability (Capra, 2004) and the process of change can happen only if it is supported by education and learning.

Education for sustainability is both present- and future-oriented, it is about learning to design and implement actions for the present, in the knowledge that the impact of these actions will have consequences in future. Education for sustainable development, addressing educational theory and practice at all levels, not only delivers knowledge and understanding, but also enables learners to change their behaviour, offering them a chance to play an active part in building a sustainable future, teaching them to make better use of resources and making them better understand their place in the world and their ability to influence future. Without coordinated educational interventions, even the best targeted policies will fail.

Responding to the efforts of promoting development of human society socially acceptable, economically viable and environmentally sustainable, United Nations adopted a resolution (2002) that sets the period 2005–2014 as the "Decade of Education for Sustainable Development", which role is to integrate the principles, values and practices of sustainable development into all aspects of education.

Universities worldwide have committed towards sustainability by signing international agreements and conventions, suggesting a growing recognition that academic environment is addressing sustainability challenges. One of the first initiatives was The Talloires Declaration (1990) stating that "universities educate most of the people who develop and manage society's institutions, bearing profound responsibilities to increase the awareness, knowledge, technologies and tools to create a sustainable future". It was followed by other commitments in this direction, as enumerated by Filho (2011): The Halifax Declaration "Creating a Common Future: an Action Plan for Universities" (1991), Copernicus — Universities Charter on Sustainable Development (1994), The Luneburg Declaration on Higher Education for Sustainable Development (2001), The Ubuntu Declaration on Education and Science and Technology for Sustainable Development (2002), The Graz Declaration on Committing Universities to Sustainable Development (2005), G8 University Summit: Sustainability Declaration (2008), G8 University Summit: Statement of Action (2010). This kind of commitment to sustainable education is only one of the first steps in universities taking responsibility for playing the role of change agent towards sustainability.

There is vast literature debating on universities' role in changing behaviour towards sustainable development (e.g., Clugston and Calder, 1999; Stanton et al., 1999; Eckel et al., 1999; Calder and Clugston, 2003; Calder and Dautremont-Smith, 2009; Filho, 2011), considering that a university fully committed to sustainability emphasizes an interdisciplinary and holistic approach to fostering knowledge, skills and attitudes needed to build a more sustainable world for present and future generations, reflecting sustainability in each of its core areas: curriculum, research, operations, community outreach, student life and also in its mission, policy and planning.

Sustainable development brings many challenges to universities. Despite the fact that most of them are pursuing matters related to sustainable development, many of them have not succeeded in fully implementing its principles, as the implementation of sustainable development at universities is not only a matter of policy. Wals and Blaze Corcoran (2006) state that sustainability is about systemic change within institutions allowing transformative learning to take place. Holmberg (2006) synthetically presents these systemic changes, highlighting that sustainability issues must be approached from a range of disciplinary angles, cultural perspectives, different time

perspectives and a range of spatial perspectives. McNamara (2010) proposes a synthesis of factors of successful change efforts in higher education, integrating different approaches of the topic in literature.

The real challenge for universities is to train graduates for an integral vision which is able to change behaviour toward life quality of future generations. True change is not just a shift in intentions, it requires altered values and norms leading to choices which generate environmental, social and economic outcomes that are tangibly superior to those created by previous decisions (Beer and Nohria, 2000). In this context, universities must become leaders and role models in adopting and communicating sustainable practices. As Manga states (2004), in order to navigate through this evolutionary journey, a new kind of leadership is needed, by a person educated in perceiving and understanding complex systems, in understanding the scientific principles of sustainability, who is capable of envisioning the sustainable future of the community.

2. Research on the Role of Romanian Universities in Supporting Change towards Sustainable Development.

Methodology. The research goal is to provide a representative imagine of how Romanian universities have assumed the role of generating change towards sustainable development. Thus, we aim to identify categories of actions and initiatives, guided by the subject landmarks in literature, presented in the first part of the paper.

The research objectives are:

1. To evaluate the internalization of sustainability concepts within mission/vision/strategic objectives of universities.
2. To identify educational offers' oriented onto sustainability.
3. To determine the interest in sustainability reflected in the research activity.
4. To determine the universities' role in relation to the external environment (community, government, business environment).
5. To identify "green" projects implemented in universities.

In terms of investigation type, the research is qualitative, mainly descriptive, as the study describes how universities understand, support and involve in actions aimed to change behaviour, and explicative, as this research aims to offer a better understanding of the way in which concepts related to sustainability are applied in Romanian universities.

The research methodology is the thematic content analysis, which aims to identify common themes based on a coding scheme. For this purpose, we used thematic content analysis of the data published on the universities' websites and documents (e.g., University Charter, annual reports, strategic and operational plans, research reports, reports regarding relations with community). We followed the classical algorithm of the content analysis: unitizing, sampling, recording, reducing, inferring and narrating.

As unit of analysis, we considered the sections in universities websites and documents referring to mission/vision/goals, academic studies, research activity, relation with the external environment and implemented projects. We searched for the narrative aspects related to sustainability and the material was organized according to aspects described voluntarily by universities.

Establishing the sample. The main criterion considered in choosing the sample was if Romanian universities explicitly committed to sustainability, by signing The

Copernicus Charter for Sustainable Development. Applying this criterion we identified 8 universities in Romania which signed this document: "Transylvania" University of Brasov, Polytechnic University of Bucharest, University of Bucharest, Romanian University of Science and Arts "Gheorghe Cristea" Bucharest, "Babes-Bolyai" University of Cluj-Napoca, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, University of Craiova, Polytechnic University of Timisoara. The premise that we started from is that these universities could present models of good practices, given that, at least, proved intention and willingness to make sustainable education. To assure the relevancy of the sample, we also presented the selected universities' positioning in the latest ranking according to The National Education Law (from the selected universities: 5 are the universities of advanced research and education, one is the university of education and scientific research, one is the university of education and artistic creation, and one is the education-centred university), thus covering all the spectrum. The selected universities, through their areas of education and research cover almost completely the whole range of specializations: Mathematics and Natural Sciences, Engineering, Biomedical Sciences, Social Sciences, Art and Humanities.

We proceeded then to data coding, based on a coding scheme previously established, which included conditions for a sustainable approach, as identified in the literature. We searched for the phrase "sustainability", but also for the related terminology (e.g. "eco/greening").

Following this algorithm, the data were collected, selected, reduced and analyzed from a qualitative perspective, to offer answers according to the research objectives.

Although providing a synthetic imagine of sustainability in Romanian higher education, the research methodology generates some limitations. Even if the research results offer a valid picture of subject, they cover only a limited period of time and, therefore, only a moment in the evolution of the phenomenon. Another limitation is associated with the possibility of existing universities in the sample which integrate sustainability without communicating it in a structured manner in documents or on their websites, which influences the fidelity of the results in an unquantifiable degree. The dimension of the analyzed group of universities and the research character might not lead to generalised results. However, the study may be a starting point for further research, by analyzing other dimensions of the topic using complementary methodology.

The Research Results. One of the ways in which we can evaluate the process of integrating sustainability in an organization refers to how it is reflected and specifically mentioned in the organization mission. The mission, vision and values represent strategic positioning, which dictate the entire activity of the organization, in all its areas of actions. According to Holt and Wigginton (2002), the mission captures the essence of what an organization makes and, in general terms, the activities it intends to achieve. In this respect, we analyzed the "mission / vision / values" section on the universities' websites and documents, considering any mention of sustainability. As resulted from the analysis, all the universities considered in the sample refer to sustainability in the investigated section. Thus, according to "Babes-Bolyai" University Strategic Plan, sustainable development is "a priority area". The Polytechnic

University of Bucharest "wants to be present among universities in Europe able to design and optimize processes leading to a knowledge society, to achieve the ideals of sustainable economic growth and promotes the principles of sustainable development and environmental protection". In The Charter of "Transylvania" University of Brasov it is stated that "the university mission is to produce and transfer knowledge towards society through advanced scientific research, development, innovation and technology transfer, in the field of sustainable development" and in the Charter of The Romanian University of Sciences and Arts "Gheorghe Cristea" we find that "education and training for young people aims primarily to form competences..., skills and abilities necessary to participate to the operation and development of a sustainable economy".

Another dimension for the way in which universities play an important role in shaping a sustainable-oriented behaviour is considered to be the number and types of academic programs, explicitly referring to sustainability-related concepts. After investigating the universities websites and their strategic and operational plans in the sections referring to "academic programs", we came to the conclusion that 7 of the 8 investigated universities offer academic programs approaching sustainability issues. We identified 24 academic programs of this type, as presented in Graph 1.

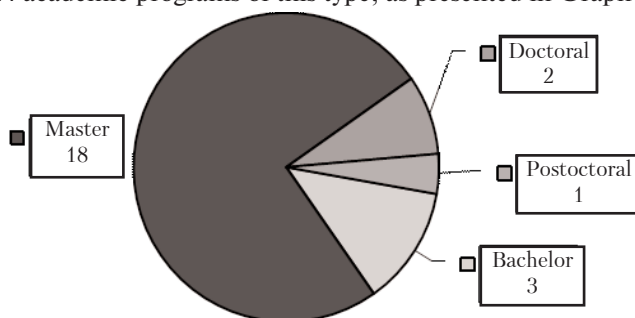


Figure 1. **Number of sustainability-related academic programs, by competence levels.** Author's calculations

We note that most programs addressing sustainability are of Master level, which is considered a level of specific specialization. However, we speak about a relatively small number of academic programs explicitly sustainability-focused, compared to the universities' complete educational offer. Regarding the specializations of these academic programs, we illustrate some of them: "Engineering and Sustainable Rural Rehabilitation" (The Polytechnic University of Timisoara), "Product Design for Sustainable Development and Environmental Protection" ("Transylvania" University of Brasov), "Regional Sustainable Development", "Postdoctoral Program for Sustainable Development in a Knowledge Society" ("Babes-Bolyai" University), "Environmental management and sustainable development", "Doctoral Scholarship: Investment in Research — Innovation — Development for the Future" (Polytechnic University of Bucharest).

Another component of university activity, at least as important as education and training, is the research activity. Research is, besides education and innovation, the key to sustainable society. For these reasons, we chose to evaluate the orientation

towards sustainability of research activities within universities. All the analyzed universities refer to the fact that scientific research is connected to the thematic priorities drawn from the social and economic phenomena of the contemporary world, where globalization became one dominant for both cooperation and competition to enhance life quality, in compliance with sustainable development requirements. Universities carry out research activities: scientific events, research centres, research projects within national or international programs, study visits and publishing activity. Within these activities we find sustainability-oriented initiatives, among which we illustrate some as follows.

In all the investigated universities there are research centres oriented towards sustainability, such as: "The Danubian Centre of Environment Education" at Romanian University of Sciences and Arts "Gheorghe Cristea", Bucharest; "The Institute of Research and Development of Transylvania", University of Brasov; "The Platform for Training and Research on Renewable Energy and Sustainable Development – PREDUR" at Polytechnic University of Bucharest; "Research Centre for Territorial Sustainable Development", Polytechnic University of Timisoara; "Centre for Environmental Research and Sustainable Exploitation of Resources", University of Craiova.

We identified that the analyzed universities organize, yearly at least, scientific events (conferences, workshops, round tables) with the themes related to sustainable development (depending on specialization). We mention, as examples: round tables on sustainable development strategies (Romanian University of Sciences and Arts "Gheorghe Cristea", Bucharest), conference on sustainable energy ("Transylvania" University of Brasov), conferences on sustainable tourism or the relationship of crisis-environment-economy ("Babes-Bolyai" University), workshops on economic solutions for sustainable development, green architecture, environment and sustainable transport, urban planning (Polytechnic University of Timisoara), international workshop on sustainable agriculture (University of Craiova).

Another dimension of sustainable-oriented research is found in the research projects implemented in universities by teams of experts from complementary fields, financed by national and international programs and grants supporting research in this direction, whose results are reflected in studies and articles published in prestigious publications.

From the perspective of the relationship between university and external environment, current trends in European and international level are of enhancing partnerships between organizations and local community, for the benefit of both parts. A competitive university requires not only quality education and relevant research, but also knowledge transfer by offering solutions to community problems. The investigated universities refer to their role in their communities, emphasizing their commitment to promote and support local community and contribute to regional, national and international development. Some universities clearly state that the relationship with the community must be based on sustainability. The types of actions in this regard aim: to promote partnerships with local and regional authorities in order to develop common projects addressed to the community, to develop research centres for a stronger relationship with the economic environment, to develop centres of analysis and consultancy offering services for the social-economic environment, to

organize cultural, artistic, sport events addressed to local communities. For illustration, we can mention "Centre for Sustainable Development Hateg-Retezat Country" organized by University of Bucharest in association with Romanian Academy and Inter-communal Association "Hateg Country", "Centre of Integrated Geological Research", providing geotechnical consulting services, and "Centre of Regional Geography", contributing to regions sustainable development strategies in Romania ("Babes-Bolyai" University, Cluj-Napoca).

Last, but not least, we analyzed the sustainability of universities behaviour in terms of implementing "green" projects supporting sustainable development, such as: CO₂ reduction programs, projects on recycling and reusing resources, building "green" campuses etc. From this perspective, we did not identify in any of the investigated universities the existence of such projects, which would demonstrate that the university itself has adopted a sustainable behaviour and could be an example for the community.

Conclusions. Nowadays education for sustainable development is a major global concern. The role of educational institutions, especially universities, is, on one hand, to inform and form young people and society towards a changed behaviour and new attitudes based on sustainability principles and, on the other hand, to be leaders and change agents in the community through their own behaviour.

The research on how Romanian universities respond to these challenges reveals that there are preoccupations of approaching and internalizing sustainability issues in their specific activities, but we find rather random actions, without a clearly global sustainability-oriented coordination. The investigated universities mention in their mission and strategic objectives that sustainability is a key point in configuring certain actions. Among university activities, the most frequent preoccupations for sustainability are found in the research activities, reflecting their closeness to the international scientific community. Universities have also been interested in adapting their educational offers, by including academic programs on sustainable development but their number is relatively small compared. Specific activities can also be found within partnerships with local communities. Universities are deficient in implementing practical sustainability-focused projects, so that they could demonstrate that they not only educate for sustainable development, but also can be taken as examples.

The merit of this study is to contribute with an original research, in the area of sustainability approaches in Romanian universities, which may be particularly important for both researchers and academic staff, since it provides a coherent picture of an area that is currently perceived as more difficult to approach. The research findings suggest some recommendations for addressing the issues of sustainability practices in the academic environment, in order to generate change towards sustainability. In spite of its limitations, the research opens the way for future studies on the issues concerning sustainability in higher education.

Acknowledgements. *This paper is the result of the project "Transnational Network for Integrated Management of Postdoctoral Research in Communicating Sciences. Institutional building (postdoctoral school) and fellowships program (CommScie)" — POSDRU/89/1.5/S/63663, financed under the Sectoral Operational Programme Human Resources Development 2007-2013.*

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Стаття надійшла до редакції 20.05.2012.