ISSN 1392-2785 ENGINEERING ECONOMICS. 2006. No 3 (48)
WORK HUMANISM

The Role of Universities in Promoting Sustainability

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The article deals with some theoretical aspects of the sustainable development of economy, sustainable university, and the biggest attention is given to educational issues. A comparison of the concepts of education for sustainable development (ESD) and the environmental education (EE) is presented. Using theoretical approach the role of universities in the process of promoting sustainability as well as problems related to its implementation are discussed.

Environmentally responsible citizens accept responsibility for what happens in their community – not only environmentally but also politically, and socio-economically. Thus, a primary educational mission should be to teach citizens to be able to influence public decisions where environmental issues are very important.

ESD differs from previous approaches to environmental education as it focuses on developing links between environmental quality, ecology and socio-economics and the political trends. The nature of ESD requires to give people knowledge and skills for lifelong learning and to help people to find new solutions to the environmental, economic, and social issues.

One of the most important roles of institutions of higher education is ESD and especially teaching and research necessary to generate the new knowledge on sustainable development and training the leaders and teachers of tomorrow, as well as communicating this knowledge to decision-makers and the public-at-large. It is clear that graduates of any discipline need knowledge about sustainability.

Sustainability issues should be integrated within the main functions of a university: education and research processes, different operational activities of the university and its community as well as the relations of the university with the external community. All institution of higher education, including students, teachers, researchers, administration and other staff, has to follow sustainable development principles.

Universities make a large economic entity consuming a big amount of resources, purchasing products and services. Thus, they must make sustainability an integral part of the institution's daily operations (consumption, waste management, use of water, energy, and paper) and also attempt to reduce their ecological footprint. These efforts should be tied to the formal curriculum.

Research must help to introduce sustainable development principles in all areas of university activities in order to assure reasonable use of the resources, education content and process based on sustainable development values.

Institutions of higher education face certain challenges when introducing principles of sustainable development. Not all educators and leaders are familiar with the sustainable development approach and thus cannot incorporate it into the university operation. It is clear that applying principles of sustainable development universities could not only work more effectively but also promote sustainability ideas in the community.

Keywords: *economics, economy, sustainable development, sustainable university, environmental education, education for sustainable development.*

Introduction

At present local communities play much more important role in the national and global processes being the base of society and determining the directions of short-term and long-term development. Community and the environment are closely interdependent influencing formation of each other. Education has an important role in motivating and empowering people to live more sustainable lifestyles.

Brundtlant Report (1987) stressed the importance of education necessary to introduce changes for sustainable development. Agenda 21 committed countries to promoting environmental sustainability through education. In Chapter 36 it is emphasized that: "Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues" (Agenda 21, 1992). The Statement on Education for Sustainable Development (UNECE, 2003) indicates that sustainable development has become one of the main goals of formal and non-formal education, from pre-school to higher education and adult education, as well as a measure for awareness-raising and a fundamental tool for improving patterns of consumption and production.

There is a widening understanding that sustainable development is about much more than concern for the environment. Environmentally responsible citizens accept responsibility for what happens in their community – not only environmentally but also politically, and socio-economically. Therefore, a primary educational mission should be to teach citizens to be able to influence public decisions where environmental issues are extremely important. Education could play a key role in helping communities to adopt principles of sustainable development. But in order to understand what a "sustainable development of a community" means, at the same time many

different aspects have to be considered – ecological, economic, social, cultural and ethical, and their mutual influence on each other.

Universities play an important role as leaders in teaching and learning, in research and technology. It is clear that graduates of *any* discipline need knowledge about sustainability. Therefore, the role of the universities is very important to all sectors. Universities can help in providing with the new knowledge and skills needed to meet the challenges of sustainable development in a community, in raising public awareness and providing preconditions for informed decision-making, responsible behaviour and consumer choice.

The research objects. The main attention in the article is given to the analysis of the education issues in the sustainable development of the economy.

The objectives. The content of the education for sustainable development is critically investigated in the article.

The tasks. In order to fulfil these objectives, the following research tasks had to be accomplished:

- to analyse the path from environmental education to education for sustainable development;
- to analyse the role of universities in promoting sustainability.

The methods of the research. Logic abstraction, which encompasses generalization on the theoretical systems analysis of the problems of education for sustainable development according to the conclusions and research of scientists from other countries, was used in the article. The main scientific works, related to the problems have been reviewed and thoroughly analysed.

From Environmental Education to Education for Sustainable Development

Environmental education (EE) was given a ground in EU documents. In 1988 it was recognized by the Ministers of the European Union as "an integral and essential part of every European citizen's upbringing". Later the EU Fifth Action Plan for the Environment (1995) also stressed the importance of education.

Traditional thinking in EE considers that it is necessary to change human behaviour by making them more aware and knowledgeable about the environment and related issues. Csobod (2002) states that EE goal is to encourage people to be actively involved in preserving and improving their surroundings and to develop their sense of responsibility towards environment. So, EE should work to develop citizens, who are knowledgeable about the biophysical environment and its problems, aware of how to solve these problems, and motivated to work toward their solution. Much of the work in environmental education has been guided by the Tbilisi Declaration (UNESCO, 1980), which endorsed the following goals for the environmental education:

a) to foster clear awareness of, and concern about economic, social, political and ecological inter dependence in urban and rural areas;
b) to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;
c) to create new patterns of behaviour of individuals, groups and society as a whole towards the environment.

These goals described above suggest that encouraging environmentally sound behaviour is a desired outcome of EE. So, EE can be seen as a model of action, in which individuals and the community gain awareness of their environment and acquire the knowledge, values, skills, experiences and the determination to act individually and collectively in order to solve present and future environmental problems.

There is an obvious need for and integrated holistic approach to EE, which must be based on the concept of *an environmentally responsible citizen*. A responsible citizen is not passive but is involved in thoughtful, positive action regarding various aspects, which influence his or her life. So, an environmentally responsible person understands that she or he is only one of the organisms in the complex and vulnerable ecosystem and that a human being belongs to the earth. According to Worhlstrom (1996), environmental responsibility includes the following aspects: a) pro-environmental values and attitudes; b) a sensitivity to the environment; c) an ecological consciousness and in-depth knowledge of environmental issues; d) an ability to reflect environmental issues; e) a commitment to prevent and solve environmental problems; f) an action competence to solve environmental problems; g) pro-environmental actions.

In practice EE mainly speaks about environmental impact on society, i.e., pollution, wastewater, emissions and their causes and effects, pollution reduction, and nature protection. However, EE itself has many approaches which include education *about* the environment focusing on increasing knowledge and awareness of the environment, education *in* the environment through experiencing natural environment and education *for* the environment, which analyses power basis, social structures, sees environment as socially determined and aims to promote lifestyles that are compatible with the reasonable use of environmental resources.

Environmental education and education for sustainable development are considered by many to be equivalent. ESD according to Csobod (2002) is similar to education *for* the environment but also involves issues of human rights, social environment, global inequality and conflict. EE and ESD have some different aspects, and they could not be easily mixed together to get a new approach towards education. Fien and Tilbury (1999) think education for sustainability differs from previous approaches to environmental education as it focuses on developing links between environmental quality, ecology and socio-economics and the political trends.

Moor (2005a) speaks about sustainability and sustainable education as a concept, a goal, and a strategy and defines sustainable education as "education that concentrates on the concept of sustainability in a manner that fits with the values of sustainability". She also states that sustainability education is "a process of creating a space

for inquiry, dialogue, reflection, and action about the concept and goals of sustainability".

Sustainable development is dealing with complex, global relations and controversial subjects such as our life-style, consumption level and implies social equality. Negative environmental impact is seen as a consequence of unsustainable use of resources. It is also recognized that a good environmental situation will develop only when people have a decent social and economic situation and that a good environment is a precondition for a development of economy in the long-term. Thus, environmental, social and economic aspects are interwoven together in ESD. (UNECE, 2003). ESD equally addresses all three pillars of sustainable development – society, environment and economy – with culture as an essential additional and underlying dimension. Because of the interrelationship between the three dimensions of sustainable development, ESD demands changes in education towards a more integrative, process-oriented and dynamic manner emphasising the importance of critical thinking and of social learning and a democratic process.

In the Strategy for Education for Sustainable Development it is concluded that ESD is still developing as a broad and comprehensive concept, encompassing interrelated environmental, economic and social issues. It broadens the concept of EE, which has increasingly addressed a wide range of development subjects. EE should be elaborated and complemented with other fields of education in an integrative approach towards education for sustainable development. (UNECE, 2005)

Though formal education in schools and universities has the main role as concentration of knowledge and skills but other forms of education are also very important in relation to educating a participating citizen. ESD could be seen as a cross-sectoral approach and covering the main forms *of learning and education:*

- *formal learning* (leading to recognised diplomas and qualifications);
- *non-formal learning* (not leading to formal certificates and through the activities of civil society, organizations and groups);
- *informal learning* (learning from everyday life experiences).

Thus, ESD must be seen as part of a lifelong learning process taking into account the changing ecological conditions associated with economic, social and cultural development. ESD enables all individuals to fully develop the knowledge, perspectives, values and skills necessary to take part in decisions to improve the quality of life both locally and globally on terms which are most relevant to their daily lives.

The documents for the UN Decade of ESD distinguishes four major domains of ESD, reflecting diverse goals and audiences: promotion and improvement of basic education, reorienting existing education at all levels to address SD, developing public understanding and awareness of sustainability, and training. Within these domains the following issues are indicated as the priorities: overcoming poverty, gender equality, health promotion, environmental conservation and protection, rural transformation, human rights, intercultural understanding and peace, sustainable production and consumption, information and communication technologies, cultural diversity. (UNESCO, 2003).

An important distinction is the difference between education *about* sustainable development and education *for* sustainable development. The first is an awareness lesson or theoretical discussion. The second is the use of education as a tool to achieve sustainability. ESD is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come. It is about helping individuals, communities, businesses and government to live and act sustainably and about giving them an understanding of the environmental, social and economic issues involved. The nature of ESD requires giving people knowledge and skills for lifelong learning and to help people find new solutions to their environmental, economic, and social issues. ESD could be seen as a process of learning how to make decisions that consider the long-term future of the economy, environment ecology and social equity of all communities. Building the capacity for such future-oriented thinking is a key task of ESD.

Among challenges for ESD it is possible to mention the need for integration of research and education and strengthening co-ordination and collaboration between different levels of education for sustainable development. One of the limiting factors for ESD is the fact that SD is interdisciplinary while education is still mostly mono-disciplinary. Not all educators are familiar with the sustainable development approach and thus cannot incorporate it into their teaching. Problem of understanding SD is also found among the leaders of educational institutions and also among those in political power at different levels, in the business community as well as among the public.

University role in promotion of sustainability

The main responsibility of institutions of higher education is to prepare their students for life increasing the awareness, knowledge, skills and values needed to create sustainable future. University students not only gain knowledge in certain disciplines but also pass lessons learned within the university on others outside the university.

Multiple roles of the universities in the society include research, technology innovation, knowledge creation, and interaction with community. In order to prepare graduates as active and responsible citizens, institutions of higher education must not only change for education for sustainability but also in their practice become models for sustainability themselves and in this respect they have to change in many ways. There are many ways in which universities can get involved in sustainable development and among them the following could be mentioned: education, research, management, planning, development, purchasing, transportation, construction, renovation, community service (Van Weenen, 2000). As suggested by Cortese (1999) sustainability issues should be integrated within the main functions of a university: education and research processes, different operational activities of the university and its community as well as the relations of the university with the external community.

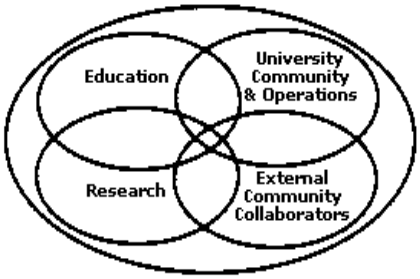

Figure. Areas of integration of sustainability within the university functions (after Cortese, 1999)

Tilbury et all (2005) agree that universities have to address the broader notions of learning for sustainability and have to work towards sustainability across management of university premises and university operations, in policy, curriculum, teaching approaches and research activities. In order to change into more sustainable institutions, as Jucker (2003) suggests, universities have to rethink their curriculum, institutional operations, directions of research, and redefinition of professional excellence. A sustainable university would have not only practice sustainability education but, according to Moor (2005a), have to be concerned about campus operations, building codes, development practices, etc. Cortese (1999) states, that this requires "a paradigm shift towards a systemic perspective, which encompasses the complex interdependence of individual social, cultural, economic and political activities and the biosphere". UN documents also oblige formal education institutions as a whole, including students, teachers, managers and other staff to follow principles of sustainable development. (UNECE, 2005) Many universities all over the world began a movement, which promotes strategies for creating more sustainable universities. A growing number of education institutions around the world have signed national and international sustainability declarations. Many of these institutions struggle to fulfil their commitments through policies and implementation.

The Talloires Declaration signed in France in 1990 was the first official statement made by university administrators of a commitment to environmental sustainability in higher education. It is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research operations and outreach at colleges and universities. It stated, "Universities educate most of the people who develop and manage society's institutions. For this reason, universities bear profound responsibilities to increase the awareness, knowledge, technologies, and tools to create an environmentally sustainable future". (ULSF, 1990)

Rethinking the curriculum in respect to ESD, institutions of higher education have to evaluate the content and teaching methods. According to Ernsteins (1996), *the content* should include the acquaintance with the interrelations between nature, social environment, and human life-long activities so that students are trained not only to analyse and find the ways of solving environmental problems, but also to plan and realize problem solutions in practice. Some authors (Jucker, 2003) suggest that change in education towards sustainability means not simply adding new disciplines but needs a fundamental change in culture and also in educational thinking and practice. Gough (2002) says that educators have four kinds of responsibility: a) to help learners understand why the idea of sustainable development ought to be of interest to them; b) to help learners gain plural perspectives on issues from a range of cultural stances; c) to provide opportunities for an active consideration of issues through appropriate teaching methods; d) to encourage students to continue to think about what to do, individually and socially. (Gough referred in Scott, 2002). ESD requires a holistic approach and besides such themes as environmental protection, natural resource management or biodiversity, key themes of sustainable development also include poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, rural and urban development, economy, production and consumption patterns, corporate responsibility. (UNECE, 2005)

In the process of education for sustainability *the context of learning* should be also considered. Orr (2002, p.31) warns: "However, well-intentioned, formal education cannot compete with the larger educational effects of highways, shopping malls, supermarkets, urban sprawl, factory farms, agribusiness, huge utilities, multinational corporations, television and non-stop advertising that teaches dominance, speed, accumulation and self-indulgent individualism" (Orr cited in Cortese, 2003). Considering this, education must provide students with critical reflection on the world and knowledge needed to bring about desired changes in behaviour towards more sustainable life-styles. Values and ethics become a central part of teaching in all the disciplines and not as a special isolated course or module in programmes. To become responsible citizens, university students must learn that people are an integral part of the biosphere, responding to changes. For example, those, who use lead-free gasoline are more knowledgeable about issues, express a greater concern, are more likely to feel that their personal action could make a difference, and feel a greater sense of personal responsibility than those who do not use lead-free gasoline.

In the process of education for sustainability students' work should be based on active, participatory, process- and solution- oriented *educational methods*. Besides the traditional ones, such methods as discussions, value clarification, scenarios, modelling, role-playing, information and communication technology, surveys, case studies, projects, good practice analyses, workplace experience should be used. (UNECE, 2005) The quality of the educational material at all levels is an important factor for promoting and facilitating the work with educational programmes and modules for sustainable development. Learning and teaching for ESD require access to various resources including textbooks, cases studies and good practices as well as media, web-resources.

It is important to find ways to invest in *human capacity building*, training and re-training of educators and of all who are interested in SD and ESD. According to Smyth (2002), people directly interested in changes towards sustainability have not yet made the critical mass of promoters needed to start holistic innovations at the universities. He also suggests that there are differences in the perception of

human/environment systems and indicated that educators, who are socially motivated, express concern that approaches towards sustainability are too "environmental", while landscape and wildlife conservation oriented educators think that socio-economic aspects are prevailing in approaches towards sustainability. So it is necessary to combine these approaches creating opportunities for them to share experiences and this is extremely important for the success of ESD. Moor (2005b) suggests that universities should consider sustainability principles in all their decisions as well as promote and practice collaboration and interdisciplinarity and focus on personal and social sustainability thus creating favourable conditions for ESD. Development of human capital should also be closely linked to the relevant research findings on SD.

Research must help to introduce SD principles in all areas of university activities in order to assure reasonable use of the resources, education content and process based on SD values. Research must work on the content of SD since according to Kliucininkas (2001) the concept of SD has different shades of meaning in different cultures and it is difficult to properly verbalize it, SD is thought to be broad and abstract, theoretical and without strong scientific background. So research institutions and programmes should take SD issues into account in their current activities and their future plans and priorities. It is clear that existing departmental, institutional, and disciplinary boundaries often hinder the promotion and effective coordination of SD research. Cortese (2003) suggested that "a paradigm shift toward a systemic perspective emphasizing collaboration and cooperation" is required. He explained that higher education usually stressed individual work and competition thus lacking cooperative efforts. However, issues related to sustainability are complex and interdependent and require interdisciplinary collaboration.

Regarding research for ESD it is important that researchers work on the following: research and development of the content of ESD, teaching and learning methods; the economic effects of and incentives for ESD; ways of including aspects of SD in different subjects, giving priority to research that brings together the different dimensions of SD; indicators and evaluation instruments for ESD; and share the results of research and examples of good practices. (UNECE, 2005)

There is a growing demand from the university communities in many countries to reduce the environmental impact of their *own operations*. Universities make a large economic entity consuming a big amount of resources, purchasing products and services. Universities have to follow-up and assess the environmental issues that emerge in the institution's daily activities and identify those practices and actions that degrade and pollute its environment on a daily basis (consumption, waste management, use of water, energy, and paper) as well as to understand and attempt to reduce their ecological footprint.

It is stated in the Talloires Declaration: "The university is a microcosm of the larger community, and the manner in which it carries out its daily activities is an important demonstration of ways to achieve environmentally responsible living. By practicing what it preaches, the university can both engage the students in understanding the institutional metabolism of materials and activities, and have them actively participate to minimize pollution and waste". (ULSF, 1990) However, Cortese (2005) notes that learning is largely separate from operations of the institution, which have a big economic, social, and environmental footprint that is largely invisible to students, teachers and the staff. So higher education must make sustainability not only an integral part of operations, purchasing and investments, but also tie these efforts to the formal curriculum. Also every person who works, studies or resides in the university environment should be involved in preparation of development strategies and management plans. (Roy et all, 2002).

University also has responsibilities related to collaboration *with external community* such as being partners in local strategy development, in organizing education activities at the community level should solve the following tasks: to reach all sector of society; to make ESD accessible for all ages promoting adult education; to mobilize community groups to assess their own needs and help them to start implementing SD initiatives. It is obvious that formal education system does not meet all the needs of the real life. So it is important to develop networks in which ESD could be planned and carried out with a bottom-up approach based on the partnership among various stakeholders including not only educational institutions but also and governmental sector, NGOs and others. The involvement and good cooperation between different actors are very important factors for reinforcement of education and learning for sustainable development. Working with university teachers and research institutes, ESD partners could use their expertise collecting and publishing the information to make this information easier to understand by ordinary people, provide dissemination of the information, thus making implementation of SD principles more effective.

Cortese (2005) stressed the importance that institutions of higher education are leaders in creating a sustainable society and pointed out the advantages: learning is improved for all (inside and outside the institution); students are prepared for citizenship and career; more of students, teachers and funding are attracted; economic, social, and environmental costs are reduced; external respect increases; cooperation across the university is improved; and higher education's moral and social responsibilities are better fulfilled.

Institutions of higher education face certain challenges when introducing principles of sustainable development into their operation as well as introducing ESD. Institutions are under the constant pressure to deliver short-term results while ESD requires taking a long-term view on sustainable development. Education has always been a conservative element in society where changes were introduced not so easily. Besides, ESD requires not only different university courses or modules but also understanding of SD by the whole university community. However, the re-education of university people can raise some resistance as generally the academic staff insists on their professional competence. It might be the challenge to convince university colleagues to become actively involved in education for ESD. There is a need to establish closer interaction among academic staff of different insti-

tutions of higher education and to set up information and data-bases as well as partnerships and networks on ESD. The first task on this way would be the adoption of a common language for SD so that all professionals, regardless of their specialty and expertise, as well as university partners within the external community could understand SD and act together.

Conclusions

1. Environmental education was given a ground in EU documents and in 1988 it was recognized by the Ministers of the European Union as an integral and essential part of every European citizen's upbringing.
2. There is an obvious need for an integrated holistic approach to EE, which must be based on the concept of an environmentally responsible citizen.
3. EE and ESD have some different aspects, and they could not be easily mixed together to get a new approach towards education.
4. ESD equally addresses all three pillars of sustainable development – society, environment and economy – with culture as an essential additional and underlying dimension.
5. Sustainability issues should be integrated within the main functions of a university: education and research processes, different operational activities of the university and its community as well as the relations of the university with the external community
6. One of the most important roles of institutions of higher education is ESD and specially teaching and scientific research necessary to generate the new knowledge on SD and training the leaders and teachers of tomorrow, as well as communicating this knowledge to decision-makers and the public-at-large.
7. Research must help to introduce SD principles in all areas of university activities in order to assure reasonable use of the resources, education content and process based on SD values as well as to promote social and economic values and policies that lead to a community sustainable future.
8. Higher education must make sustainability as an integral part of operations, purchasing and investments, and tie these efforts to the formal curriculum.

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Universitetų vaidmuo skatinant darnųjį vystymąsi

Santrauka

Vietos bendruomenės vaidina svarbų vaidmenį vietos, regiono ir globaliuose procesuose bei lemia trumpalaikio ir ilgalaikio vystymosi kryptis. Jau "Darbotvarkėje 21" pabrėžiama, kad švietimas yra svarbus skatinant bendruomenes įgyvendinti darniojo vystymosi principus. Pradedant įgyvendinti darniojo vystymosi principus aukštojo mokslo institucijose, iškyla daug neaiškumų, kurie lemia šio **straipsnio problematiką**: neapibrėžti skirtumai tarp aplinkosauginio švietimo ir darniojo vystymosi švietimo; aukštojo mokslo institucijų vaidmuo analizuojamas tik mokymo programų kontekste, nekalbama apie platesnį universitetų vaidmenį skatinant darnųjį vystymąsi (mokslinę veiklą, ryšius su bendruomene, universiteto ūkinės veiklos poveikį aplinkai).

Daugelis pasaulio universitetų įsitraukė į judėjimą, skatinantį rengti darniųjų universitetų kūrimo strategijas ir jas įgyvendindami. Darniojo vystymosi klausimai integruojami į pagrindines universiteto funkcijas: mokymo, mokymosi ir tyrimo procesus bei įvairią kasdieninę universiteto ir jo bendruomenės veiklą. Visa universiteto, siekiančio tapti darnia aukštojo mokslo institucija, bendruomenė, įskaitant studentus, dėstytojus, mokslo darbuotojus, administraciją bei kitą personalą, savo veikloje stengiasi vadovautis darniojo vystymosi principais.

Straipsnio **objektas** – darniojo ekonomikos vystymosi švietimo analizė.

Šio straipsnio **tikslai** – išanalizuoti perėjimą nuo aplinkosauginio švietimo prie darniojo vystymosi švietimo, **uždaviniai** – išanalizuoti perėjimą nuo aplinkosauginio švietimo prie darniojo vystymosi bei aptarti universitetų vaidmenį skatinant darnųjį vystymąsi.

Darniojo vystymosi švietimas (DVŠ) skiriasi nuo ankstesnio požiūrio į aplinkosauginį švietimą tuo, kad pabrėžia ryšį tarp aplinkos kokybės, ekologijos bei socioekonominių ir politinių tendencijų. DVŠ yra visą gyvenimą aprėpiantis procesas, kuris ne tik suteikia žmonėms žinių ir įgūdžių, bet ir formuoja jų nuostatas bei elgseną, leidžiančius priimti darniajam vystymuisi palankius spendimus.

Darniojo vystymosi švietimo strategijoje sakoma, kad DVŠ yra tebesivystanti ir visapusė sąvoka, apimanti aplinkosauginius, ekonominius ir socialinius klausimus. Kadangi visi šie darniojo vystymosi aspektai tarpusavyje susiję, DVŠ reikalauja pokyčių mokymo proceso, kuris turi tapti integruotu, dinamišku, pabrėžiančiu kritinio mąstymo, socialinio mokymosi ir demokratinio proceso svarbą. Svarbu, kad studentas, baigiantis bet kurios specialybės studijas, turėtų pakankamai žinių apie darnųjį vystymąsi. Pereinant prie DVŠ, be tradicinių temų (aplinkos apsauga, gamtos išteklių valdymas ar bioįvairovė), į mokymo ir mokymosi procesą turi būti įtrauktos ir tokios su darniuoju vystymusi susijusios temos kaip skurdo mažinimas, žmogaus teisės, etika, visuomenės sveikata, lyčių lygybė, kultūrinė įvairovė, kaimo ir miesto vystymasis, gamybos ir vartojimo būdai. Tačiau neužtenka į mokymo programas įtraukti kelių naujų su darniuoju vystymusi susijusių disciplinų – procesui skatinti ir stiprinti reikia fundamentalių kultūros bei pedagoginio mąstymo ir praktikos pokyčių. Kad individai galėtų veiksmingai dalyvauti priimdami sprendimus, DVŠ turi padėti jiems ne tik įgyti pakankamai žinių ir įgūdžių, bet ir gebėjimų kritiškai vertinti pasaulį, suprasti įvairius skirtingų visuomenės grupių požiūrius bei formuoti darniojo vystymosi principais pagrįstą vertybių sistemą. Reikia atsižvelgti ir į tai, kad mokymo procesui daro įtaką tokie veiksniai kaip supermarketai, miestų plėtra, tarptautinės korporacijos, televizija, reklama ir kt., mokantys žmones dominuoti, skubėti, kaupti, nuolaidžiauti savo silpnybėms. Todėl itin svarbu ugdyti sugebėjimą kritiškai mąstyti ir suvokimą, kad žmonės yra integrali biosferos dalis, reaguojanti į jos pokyčius. Jaučiantys atsakomybę už aplinką piliečiai imasi atsakomybės ir už tai, kas vyksta jų bendruomenėje ne tik aplinkos, bet ir politikos bei socialinėje ir ekonomikos srityse. Taigi aukštojo mokslo institucijų misija turėtų būti parengti piliečius, gebančius daryti įtaką sprendimams. Dėl to jos turi ne tik imtis švietimo darniajam vystymuisi, bet ir pačios turi atitinkamai keistis, kad savo veikla taptų darniojo vystymosi modeliais.

Mokslo tiriamoji veikla turi padėti diegti darniojo vystymosi principus į visas universiteto veiklos sritis: tiek užtikrinant racionalų išteklių panaudojimą, tiek integruojant darniojo vystymosi vertybes į mokymo turinį ir procesą. Pagrindinės DVŠ tyrimų kryptys nurodomos JT dokumentuose: DVŠ sąvokos, turinio tyrimai ir vystymas, DVŠ ekonominis efektyvumas, įvairių darniojo vystymosi aspektų integracijos į skirtingas disciplinas būdai, DVŠ vertinimo instrumentai ir indikatoriai. Akivaizdu, kad dabar vykdant mokslinius tyrimus darniojo vystymosi srityje, ribos tarp departamentų, institucijų ar(ir) disciplinų, dažnai tampa kliūtimi skatinti ir koordinuoti efektyvų bendradarbiavimą. Tačiau su darniuoju vystymusi susijusios problemos yra kompleksinės ir susijusios tarpusavyje, ir joms išspręsti būtinas tarpdisciplininis bendradarbiavimas.

Kadangi universitetai naudoja daug išteklių, darniojo vystymosi principai turėtų tapti integralia šių institucijų kasdieninių operacijų (pirkimai, investicijos, statybos ir remonto darbai, vandens ir energijos suvartojimas) dalimi, o įgyvendinimo pavyzdžiai būti siejami su formaliu studentų mokymu. Universiteto bendruomenė turėtų suprasti, kokį „ekologinį pėdsaką" ji palieka, ir siekti jį sumažinti.

Stiprinant mokymą ir mokymąsi darniojo vystymosi klausimais, svarbus veiksnys yra įvairių dalyvių įsitraukimas į DVŠ ir sėkmingas jų bendradarbiavimas. Be formalaus švietimo, kitos mokymo ir mokymosi formos taip pat yra svarbios ugdant aktyvų, dalyvaujantį pilietį. Darniojo vystymosi švietimui svarbus tarpsektorinis požiūris, kuris apima įvairias mokymo ir mokymosi formas: formalųjį švietimą, neformalųjį švietimą ir neoficialųjį švietimą. Šiuo požiūriu universitetų ir bendruomenių partnerystė gali padaryti DVŠ prieinamą įvairioms visuomenės grupėms, skatinti suaugusiųjų švietimą, sutelkti bendruomenės grupes ir padėti joms įgyvendinti darniojo vystymosi principus. Universitetai gali padėti bendruomenėms rengti vietos bendruomenių darniojo vystymosi strategijas, organizuoti mokymus bendruomenei. Bendradarbiaudami su universitetų dėstytojais ir mokslinio tyrimo institutais bei centrais, DVŠ partneriai gali panaudoti savo patirtį, rinkdami ir publikuodami informaciją taip, kad ši informacija būtų suprantamesnė eiliniams žmonėms, taip pat pasirūpinti informacijos sklaida, ir tuo prisidėti prie efektyvesnio darniojo vystymosi principų įgyvendinimo bendruomenėse.

Pradėdami taikyti darniojo vystymosi principus savo veikloje, universitetai susiduria su įvairiais iššūkiais. DVŠ reikalauja ne tik pokyčių mokymo programose bei mokymo ir mokymosi procesuose – būtina, kad darnųjį vystymąsi suprastų visa universitetinė bendruomenė. Ne visi dėstytojai ir aukštojo mokslo institucijų vadovai savo veikloje gali vadovautis darniojo vystymosi principais, nes ne visi gerai juos žino. Nors akivaizdu, kad yra būtinas žmogiškųjų išteklių gebėjimų stiprinimas darniojo vystymosi klausimais, bet gali būti nelengva įtikinti universitetų darbuotojus aktyviai įsitraukti į DVŠ.

Svarbu sustiprinti ryšius tarp akademinės bendruomenės narių, atstovaujančių skirtingoms aukštojo mokslo institucijoms, bei sudaryti informacijos ir duomenų bazes, ieškoti partnerių dirbti darniojo vystymosi švietimui aktualiais klausimais. Pirmasis tokio bendradarbiavimo uždavinys – susitarti dėl bendrų darniojo vystymosi sąvokų, kad visi profesionalai bei universitetų partneriai-visuomenės atstovai, nepriklausomai nuo jų specialybės ir patirties, suprastų darniojo vystymosi principus ir galėtų veikti kartu.

Nors žmonės, tiesiogiai suinteresuoti pokyčiais, skatinančiais darniojo vystymosi principų įgyvendinimą universitetuose, dar nesudaro kritinės masės, kurios reikia pradėti holistiniams pokyčiams, bet vis akivaizdžiau matyti, kad, savo veikloje taikydami darniojo vystymosi principus, universitetai gali ne tik veiksmingiau dirbti, bet ir demonstruoti darniojo universiteto pavyzdį visuomenei.

Apibendrinant galima teigti, kad:

1) DVŠ vienodai svarbiais laiko visus tris pagrindinius darniojo vystymosi aspektus – visuomenę, aplinką ir ekonomiką;
2) aukštojo mokslo institucijos turi inkorporuoti DVŠ į mokymo procesą ir mokslinę veiklą, būtinus siekiant sukurti naujų žinių apie darnųjį vystymąsi bei ruošiant ateities vadovus, specialistus, taip pat perduodant šias žinias spendimų priėmėjams ir visuomenei;
3) mokslinė tiriamoji veikla turi padėti įdiegti darniojo vystymosi principus į visas universiteto veiklos sritis: tiek užtikrinant racionalų išteklių naudojimą, tiek integruojant darniojo vystymosi vertybes į mokymo turinį ir procesą;
4) darniojo vystymosi principai turi tapti integralia aukštojo mokslo institucijų kasdieninių operacijų (pirkimai, investicijos, statybos ir remonto darbai, vandens ir energijos suvartojimas) dalimi.

Raktažodžiai: *ekonomika, darnusis vystymasis, aplinkosauginis švietimas, darniojo vystymosi švietimas, darnusis universitetas.*

The article has been reviewed.

Received in February 2006; accepted in June, 2006.

DOI: 10.5755/j01.ee.48.3.11373