

**Review article**

**STATE OF HIGHER EDUCATION FOR SUSTAINABLE  
DEVELOPMENT IN THE REPUBLIC OF SERBIA**

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**Abstract.** *An important part of the general agreement on the importance of education in achieving the goals of sustainable development also refers to the function and responsibility of the University. In this context, in recent years, much attention has been paid to advancing the process of integrating sustainability in universities, which is accompanied by the adoption of a transformative approach, linking theoretical with practical discourse and exploring new applications within and between scientific disciplines. The paper will present the concept of sustainable development in the context of education, with special emphasis on the presentation of education for sustainable development in the educational systems of Serbia. The focus of the paper is the analysis of the state of sustainable development in academic education in our country. The aim was to examine the extent to which education for sustainable development is represented at the faculties of social sciences and humanities of the University of Serbia. The selected methodology was based on the content analysis of the curriculum and syllabus with interviews with professors and assistants of selected faculties. Given that professors have been identified as bearers of education for sustainable development, the key to educating students for sustainable development is, and must be, in the education and continuous training of pedagogical staff in this field.*

**Key words:** *education, Sustainable Development, Environment, curriculum/syllabus, university*

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## 1. INTRODUCTORY CONSIDERATION

Education is a fundamental precondition and basic precondition for achieving sustainable development. It is clear that the only way to enable people to live and work in accordance with sustainable development is education. In the last ten years, education for sustainable development has become the dominant formula for the development and transformation of educational systems, and is therefore considered the greatest challenge of our time. Education, in the concept of sustainable development, encourages, prepares and involves individuals and social groups in analyzing the way of life and work, in making the right decisions and creating ways of thinking in the direction of sustainable development. Let us remind you that the goal of sustainable development is to meet the needs of the present without fear that future generations will not be able to meet their needs. Such development is permanent, sustainable, capable and open to the future (Prodović, 2014, p. 11).

Sustainability and sustainable development are sources of many misunderstandings, so many refer to the "uncertainty" of this concept (Gidens, 2010, p. 125). What presents a specific difficulty in defining sustainable development, as theories and phenomena, are its generality and universality, but also conceptual inconsistency. First, defining sustainable development, which includes economic, cultural and environmental development, is in itself complex and contradictory, because none of these, let's call them "special" developments, are interconnected in reality to such an extent that we can unite them and identify in one definition. Therefore, sustainable development can be defined differently within the economic sciences, cultural studies, sociology, political science, social policy and even social ecology; which creates a certain theoretical confusion (for more details on the definitions, see: Marković, 2005, pp. 399-401; Đukić, 2011, pp. 3-25; Đukanović, 1996, pp. 171-172; Nadić, Šuvaković, 2011, pp. 161-167). Sustainable development should not be accepted uncritically. However, that is exactly what is happening. Therefore, in practice, sustainable development is becoming a new type of planetary ideology, or a new planetary religion, which must not be doubted or criticized. That is why, under the influence of modern processes of globalization and transition, which our country is going through, we often wonder whether we should go beyond the fact that the very definition of sustainable development carries so many ambiguities and futuristic-egalitarian phrases, which suggest that it represents a long political, social, economic and environmental process that can only be a postponement of what will inevitably happen in the future, but also a delusion that it is only possible to improve the existing situation. For all its complexity and vagueness, the concept of sustainable development has significant potential for motivating the energy of various social actors, both locally and regionally, and globally. Theoretical implications of the concept of sustainable development and its concept, which has developed particularly intensively in the last forty years and which is often taken as a daily superficially used term without deeper knowledge and possibilities of its application, are extensively given and presented in the theoretical part presented in the defended master's thesis 2014 (for more details see: Prodović, 2014).

Innovative societies as societies where knowledge is valued as a resource, invest in education and science, with a developed information infrastructure in which the individuality, ability and creativity of individuals and organizations are highly valued<sup>1</sup>. Starting from these

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<sup>1</sup> In 1980, Japan changed its development strategy, where instead of investing in heavy industry and petrochemistry, they invested in activities based on the human mind and knowledge, which consume little energy and raw materials. For example, in the United States, the number of employees in high-knowledge industries (eg, professional and

attitudes, it is necessary to learn and understand throughout life that the essence of learning means teaching people to think, and not just to accumulate facts.

Starting from these attitudes, it is necessary to learn and understand throughout life that the essence of learning means teaching people to think, and not just to accumulate facts.

Such education for sustainable development and environment is especially reflected in the originality of methods and selected thematic frameworks for studying scientific fields that concern, perhaps, the greatest challenge of today, theoretical and applied interdisciplinary understanding and achieving the principles of sustainable development. Unfortunately, there are not enough scientific and highly educated profiles in this field, which are ready to respond to all the challenges of the upcoming European integration and increasingly demanding European standards in environmental protection. Experts in these fields are necessary in every modern society because they represent a key element in preserving the environment, and thus provide the necessary basis for sustainable development of society as a whole. Through education for sustainable development, experts will be created who will be able to accept the principles of sustainable development and develop skills and competencies for highly professional work in immediate areas that are the focus of sustainable development and acquire competencies for applying sustainable development principles in everyday work areas. In addition, they will be able to respond to the challenges of global change and launch a number of studies, which would be important for each individual and for society as a whole. We need educated people who learn quickly, who are innovative and creative to change their abilities in accordance with technological development and global development trends. Such education is completely justified and useful for the whole society, because it contributes to the expansion of scientific bases and strengthening of scientific-research capacities and possibilities in areas important for the environment, and especially in the field of sustainable development. In fact, education for sustainable development and the environment would be the training of future researchers for a new society, based on the concept of sustainability, which involves aligning economic growth and development with environmental interests, which encourages and promotes complex training and development through applied research, qualified, critical and self-critical thinking and approach to solving environmental problems.

"It is important to state that education for sustainable development should not be reduced to presenting the theory of sustainable development, but as a realistic, active and effective form of work that allows students not only to acquire knowledge but also their practical application" (Maletaški, 2018). "Education for sustainable development is a modern topic today. Lay people think of it in a politicized way, linking it to the economy or to the traditional understanding of propaganda political ecology" (Previšić, 2008, p. 58). In a time of rapid social change, it is important to develop awareness of the importance of the concept of sustainable development at all levels of education. Therefore, it represents a serious investment. That is why it is necessary to choose the right education, because investing in education means investing in the future.

Hence, there is a growing need to make this notion operational, not only in the context of political declarations, but also in terms of school and university education<sup>2</sup>, and that

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business services) is equal to the number of employees in industry. In the UK, the main priority of the government is the education of its citizens. This commitment was confirmed by the appointment of the "First Under-secretary of State for Lifelong Learning.

<sup>2</sup> The Enlightenment gave a strong impetus to education in general, and university education in particular, because it discovered one of the most important driving forces of social development in the spread of education.

education in general is confronted with an understanding of integrally sustainable development and its operationalization<sup>3</sup>. As the implementation of the sustainable development program at the University is inevitable, it is a place where knowledge and skills are learned and adopted on the one hand, while on the other hand they serve their critical reflection and re-examination. Only if the abilities of future generations to apply these principles are improved, only in this way will the sustainability of our civilization and way of life be created and achieved.

There are more and more initiatives and efforts to incorporate the principles of sustainable development into as many curricula as possible, rather than treating sustainable development as a separate topic through special subjects. The first and partial insights into the presence of ideas of sustainable development in university education in Serbia show that these processes have begun, but that there is a wide space and an obvious need to significantly expand this field. In addition to changing the syllabus, it is important to change the approach to education, with a change in the techniques and methods of learning and teaching.

## 2. EDUCATION FOR SUSTAINABLE DEVELOPMENT AT FACULTIES IN SERBIA – RESEARCH METHODOLOGY

Given that Serbia has adopted international documents and strategies that have opted for the development of education for sustainable development, the question arises as to how the provisions of these documents have been implemented in practice. Analyzing the relevant sources, the authors Ch. Desha and Ch. Hargroves provides examples of declarations and action plans that support education for sustainable development at all levels of education, with an emphasis on higher education (Desha, Hargroves, 2014, p. 10)<sup>4</sup>.

Having in mind the accepted interpretation of education for sustainable development, the paper gives an analysis of the syllabus of all state and private universities and faculties in Serbia, with the help of which it determines how much sustainable development content is applied in university education in our country.

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In the 19th century, universities made a key contribution to industrial development and social progress in every respect. Without the development of natural and technical sciences at universities, social progress in the development of productive forces is inconceivable, as recorded in the so-called era. industrial revolutions. However, the real explosion of university education did not occur until the second half of the 20th century. According to the International Journal of Sociometrics, Infometrics and Bibliometrics, there are 17.036 registered universities today. It is calculated, however, that for less than half, ie. about nine thousand, can be considered to meet all the necessary today's standards of a higher education institution.

<sup>3</sup> Thus, for example, in order to determine the extent to which other national strategies are in line with the NSSD of the Republic of Serbia, the identification was based on key concepts that make up the principles of sustainable development, such as: sustainable development, solidarity, environment, precaution, peace, democracy, etc. Based on the (physical) presence of these key terms in certain strategies, their functional presence was analyzed, ie to whom these terms specifically refer or what they specifically explain and to which other processes they refer. The authors emphasize that they also relied on such a strategy in their research.

<sup>4</sup> On key international and national documents that indicate the need and importance of this issue, that is, they are important for research and understanding of this problem, see: Prodović, 2022: 28-56.

### **2.1. The subject of the paper**

The subject of the paper is aimed at monitoring the integration of sustainable development programs into various student programs. Quantitatively, the research is based on the analysis of the representation of sustainable development in academic education in Serbia. The extent to which education for sustainable development (curriculum content analysis) is present at the faculties of social sciences and humanities of the University of Serbia in the period from 2010. to 2020. was investigated<sup>5</sup>. The place of sustainable development in the curricula of all levels and forms of education was considered. The subject of the research is also the examination of the dissemination of knowledge, which should be connected with the knowledge that the successful development of the economy requires its humanization and taking care of people. On the line of such considerations of contemporary problems, the concept of environmental education was created, ie. disseminating and acquiring knowledge about the environment and the need to preserve it, in order to develop environmental awareness. In the context of this approach, the concept of social development as sustainable development (whose essence is in harmonized social development with environmental opportunities and laws), and environmental education is renamed education for sustainable development.

### **2.2. Aim of the paper**

The aim of this analysis is to consider its place in the curricula of university education within the framework of education for sustainable development. Such education should enable the acquisition of environmental knowledge of different levels that are appropriate to the character and level of education. Hence the goal of the work is twofold. First, it should present the basic features of the concept of sustainable development, as well as the fundamental principles on which this concept is established. Second, the paper seeks to determine how the education system needs to be reformed in order to formulate Education for Sustainable Development. With this analysis, the authors actually wanted to point out the complexity of the concept of sustainable development with a tendency to present normative assumptions for the introduction of sustainable development in university education in Serbia. Their aim is to point out different understandings of the role and function of university education to a more critical understanding of education for sustainable development. This analysis is especially contributed by this analysis of the representation of sustainable development at the faculties of social sciences and humanities of the University of Serbia. The social significance of such an analysis would be reflected in the fact that it will be available to the interested public who will be able to get acquainted with research efforts and research results, which can be an incentive for some social activities, as a guide for educational policy planning. The contribution also lies in the possibility of concrete application of the obtained research results in practice.

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<sup>5</sup> It is about the analysis of the syllabus of all state and private universities and faculties in Serbia. It is necessary to mention that this analysis builds on the analysis of the syllabus from 2013 - as a study that is part of the master's thesis of one of the authors (see: Prodović, 2014). The confirmed hypotheses at the time referred to the fact that sustainable development at the faculties of social sciences and humanities was not adequately represented; that higher education institutions pay very little attention to the concept of sustainable development; that higher education institutions do not educate students for sustainable development; that there is no subject in basic studies that contains the term sustainable development in its title; most of the subjects that deal with sustainable development in one way or another are of an elective nature; and that a very small number of students chose and listened to subjects dealing with sustainable development (see: Prodović, 2014).

As a general hypothesis that is set in the paper is that sustainable development at the faculties of social sciences and humanities is not adequately represented. In addition to this, the paper started from special hypotheses: that higher education institutions (in this case, faculties of social and humanistic character) pay very little attention to the concept of sustainable development; and that higher education institutions do not educate students for sustainable development.

### 2.3. Data source

The methodology is based on the content analysis of the curriculum and syllabus with conversations with professors and assistants of the Faculty of Social Sciences and Humanities of the University of Serbia, for the period from 2010 to 2020. The research population consists of syllabi and curricula of basic academic studies, master's and doctoral studies; namely the Universities of Nis, Pristina, Kragujevac, Novi Sad and Belgrade. The analysis also takes into account universities in the territory of the Republic of Serbia, which are not owned by it. This applied procedure enabled the creation of an experiential basis for testing the set hypotheses on the studied population. The following table (Table 1) shows all analyzed Universities in the territory of the Republic of Serbia, at the time of the research.

**Table 1** Universities and faculties on the territory of the Republic of Serbia

<i>Names of universities in the Republic of Serbia</i> Universities founded by the Republic	Universities whose founder is not the Republic
Universities in Belgrade	Alfa Braća Karić University, Belgrade
Belgrade University of Arts	University Singidunum, Belgrade
University in Kragujevac	Megatrend University, Belgrade
University in Nis	University Union, Belgrade
University of Pristina with temporary seat in Kosovska Mitrovica	Metropolitan University
University in Novi Sad	International University of Novi Pazar
State University of Novi Pazar	Business Academy, Novi Sad
	European University, Belgrade

*Source:* Author's personal table

In the focus of the author's analyzes, the faculties of social sciences and humanities were taken into account, namely: Faculty of Economics, Law, Philosophy, Philology, Faculty of Teacher Education, Faculty of Sports and Physical Education, Faculty of Occupational Safety and the Faculty of Arts. In addition to the analysis of the syllabus of these University Centers (Nis, Pristina, Kragujevac, Belgrade and Novi Sad), a special review was made of private faculties (with their headquarters in Belgrade, Novi Sad, Nis and Novi Pazar). The method used - content analysis - implies systematic counting, assessment, interpretation and analysis of the observed research object (for more details on methodological tools see: Bešić, 2019; Branković, 2014; Đorić, Popović, 2000).

### 3. RESULTS OF THE ANALYSIS SYLLABUS OF THE SOCIAL – HUMANISTIC FACULTY IN SERBIA

By analyzing the study programs of the analyzed faculties in the Republic of Serbia, the authors came to the conclusion that all Serbian universities have implemented certain contents that can be related to education for sustainable development, at least some, and some and all, levels of academic studies. We note that the interpretation of the obtained findings will be analyzed in relation to the first cycle of research (see: Prođović, 2014; Prođović, Milojković, Prođović, 2014a). In this context, we can single out a few additional observations.

First, unlike the previously mentioned analysis (Prođović, 2014; Prođović, Milojković, Prođović, 2014a: 121-136), the authors reveal a larger number of newly accredited programs within which can be singled out subjects that are basically dealing with sustainable development. What the authors point out is the increased expansion of new modules/subjects that deal with the environmental segment within their thematic units. Such a situation is present in both state and private faculties. The list of new subjects in both undergraduate and master's and doctoral studies, within the old and new accredited programs, is given in the table below (see Table 2).

**Table 2** New subjects dealing with sustainable development at state faculties in Serbia

	BASIC STUDIES	MASTER STUDIES	PHD STUDIES
	Studies program	Studies program	Studies program
		UNIVERSITY OF NIŠ Faculty of Economics	
NEW(S) SUBJECT(S):	Industrial Economics, Agrarian Management and National Economy		
		UNIVERSITY OF PRIŠTINA Faculty of Philosophy	
NEW(S) SUBJECT(S):	Practicum - Social psychology		Social ecology and environmental policy
		Faculty of Law	
NEW(S) SUBJECT(S):	Fundamentals of economic policy of the European Union; Economic integration and the EU		
		UNIVERSITY OF KRAGUJEVAC Faculty of Economics	
NEW(S) SUBJECT(S):	Economics of agriculture, Economics of natural and economic resources, Theory and analysis of economic policy		
		Faculty of Pedagogy	
NEW(S) SUBJECT(S):	Health education		Contemporary understanding of nature
		Faculty of Philology and Arts	
NEW(S) SUBJECT(S):			Ecological architecture
NEW(S) SUBJECT(S):		Faculty of Pedagogical Science Sustainable development of the environment	
		UNIVERSITY OF NOVI SAD Faculty of Economics	
NEW(S) SUBJECT(S):	European integration, Economic analysis of agricultural programs; Public sector economics		

Faculty of Philosophy			
NEW(S) SUBJECT(S):	Bioethics; Ecological pedagogy; Sociology of education, City ecology	Philosophy of lifelong learning; Sociology of education	Education for sustainable development; Education and sustainable development
Faculty of Pedagogy			
NEW(S) SUBJECT(S):	Health education		
Faculty of Law			
NEW(S) SUBJECT(S):	Land and water law		Environmental law
UNIVERSITY OF BELGRADE Faculty of Economics			
NEW(S) SUBJECT(S):	Agricultural Economics, Sociology; Theory and planning of economic development		
Faculty of Law			
NEW(S) SUBJECT(S):	Fundamentals of sociology of law; International public law	Animal rights, Environmental law, European Union environmental law and policy, Access to justice in environmental matters, Liability for environmental damage in the light of international environmental law, Environmental policy and European Union law, Quality management and green procurement, Sustainability and innovation	International law for the protection of the human environment
Faculty of Philosophy			
NEW(S) SUBJECT(S):	Philosophy of Adult Education, Adult Education for the Environment, Environmental Archeology, Introduction to Sociology; Sociology of rural development	Introduction to sustainable development studies, Migration and sustainable development, Sustainable local development	The sociology of education
Faculty of Political Science			
NEW(S) SUBJECT(S):	Contemporary Sociological Theories, Contemporary Environmental Policy and Sustainable Development, Globalization and Contemporary Society, Public Relations in Environmental Policy, Environmental Security, Political System and Economic Development, Globalization and Social Policy, Peace and Development	Contemporary Sociological Theories, Contemporary Environmental Policy and Sustainable Development, Globalization and Contemporary Society, Public Relations in Environmental Policy, Environmental Security, Political System and Economic Development, Globalization and Social Policy, Peace and Development	Ecological risks of the modern age
Faculty of Security			
NEW(S) SUBJECT(S):	Spatial planning and protection, Monitoring in protection; Management in protection systems		Civil protection and environmental protection
Faculty of Sports and Physical Education			
NEW(S) SUBJECT(S):	Health education		

*Source:* Author's personal table



Special mention should be made of the *Faculty of Occupational Safety, University of Nis*, as one of the few state faculties that in its organization of teaching content, both in undergraduate and especially in master's studies takes into account the importance of environmental research, protection, environmental risk, sustainable development and environmental education. Among the subjects in undergraduate studies, within the module Protection of the working and environment, the following stand out: *Ecology*; then the subject *Theory and organization of education for protection, Fundamentals of protection systems, Sociology, Economics of protection, Technological systems and protection, Chemical parameters of work and environment*. It is worth mentioning the study program in the third year of the Basic Studies of Environmental Protection, within which this thematic unit is covered in the following subjects: *Energy Processes and Environment, Electromagnetic Radiation in the Environment, Waste Management, Ecology, Environmental Chemistry, Information Technology in Protection, Utilities and Environment, Environment and Health*. In the fourth year we have the module Environmental Protection where we can single out the subjects - *Industrial Ecology, Environmental Noise, Spatial Planning and Environmental Protection, Work and Environmental Quality Indicators, Environmental Protection and Insurance, Environmental Risk, Sustainable Development, Impact Assessment the environment*. In the master's academic studies within the modules of Environmental Engineering and Environmental Management, in addition to subjects that directly deal with sustainable development, we should mention the list of subjects that "bypass" the concept of sustainable development. This list includes the following subjects: *Technological Processes and Environment, Renewable Energy Sources, Environmental Management, Environmental Impact Assessment, Environmental Monitoring, Ecotoxicology, Environmental Psychology and Environmental Chemistry. Urban ecology, Environmental economics, Environment and health, Environmental law, Social ecology, Environmental policy, Business ethics in environmental protection, Education for environmental protection and sustainable development, Local sustainable development* are directly involved in sustainable development<sup>6</sup>. It should not be left out here that the outcome of such learning is based on the possession of a developed system of knowledge in the field of education for environmental protection and sustainable development; understanding the role and responsibilities and considering and considering the possibilities of environmental education in the strategy of sustainable development. In the module Management of the communal system, in addition to the above-mentioned subjects (*Environment and Health, Environmental Protection Law, Environmental Protection Policy and Education for Environmental Protection and Sustainable Development*), the subject *Sustainable Housing* is also highlighted. There are two modules in doctoral studies: a) Safety engineering at work with subjects: *Physical processes in the work and environment and Air Pollution Emission Management*; and b) module Environmental Engineering with subjects: *Environmental Management Methods, Physical Processes in Work and Environment, Chemical Processes in the Environment, Air Pollution Emission Management, Energy Processes and the Environment, Electromagnetic Radiation in the Environment, Pollution and Remediation land, Selected chapters of the theory of sustainable development, Selected chapters of renewable energy sources, Selected chapters of urban ecology, Environmental risk management, as well as Environmental knowledge management* in which direct or indirect calls for sustainable development<sup>7</sup>.

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<sup>6</sup> These are just some of the topics covered, others can be found in the syllabi of the subject itself.

<sup>7</sup> Source: portal of the Faculty of Occupational Safety in Nis: <http://www.znrfak.ni.ac.rs>.

In the context of this story, but now among private faculties, we must mention the *Metropolitan University in Belgrade*, where the *Faculty of Applied Ecology - Futura* stands out, within which subjects that emphasize sustainable development are singled out, as well as master's (with two accredited new modules) and doctoral studies (Prodović, 2014). The list of new subjects at all three levels, within the old and new accredited programs, is given in the table below (see Table 3).

**Table 3** New subjects dealing with sustainable development at private faculties in Serbia

	BASIC STUDIES Studies program	MASTER STUDIES Studies program	PHD STUDIES Studies program
UNIVERSITY Academy of Economics in Novi Sad			
NEW(S) SUBJECT(S):	Biology, Biogeography, Environmental Chemistry, Environmental Monitoring, Protected Areas, Fundamentals of Ecotoxicology, Natural Resources Management, Plant Ecology, Microorganism Ecology, Ecological Energy and Renewable Energy Sources, Economic Aspects of Environmental Protection, Environmental Regulation and Standardization, Agroecology, Social Ecology, Environmental Technology, Human Ecology, Professional Research Project in Ecology, Chemical Environmental Analysis, Waste Management; Ecology management		
UNIVERSITY OF SINGIDUNUM			
NEW(S) SUBJECT(S):	Modern methods of environmental data processing, New technologies in environmental engineering and management, Modern methods of environmental monitoring, Adaptation and mitigation of the environment, Environmental safety, Sustainable tourism	Sustainable development in tourism and hospitality	
ALFA UNIVERSITY IN BELGRADE			
NEW(S) SUBJECT(S):	Agro business and agrarian economy; Environmental management	Environmental management standards	
MEGATREND UNIVERSITY IN BELGRADE			
NEW(S) SUBJECT(S):	Sustainable Development; Ecological management of beef and milk production, Ecological principles of vegetable production, Plant protection in organic agriculture, Land and water management; Natural Resources Management, Fundamentals of Industrial Technologies; Operating procedures and environmental protection	Natural resource management and environmental protection; Economic and economic development management; Sustainable development and green economy	Scientific bases of sustainable development, Economics of natural resources; Rural economy and development

UNION UNIVERSITY		
NEW(S) SUBJECT(S):	Environmental management and sustainable development	
UNION UNIVERSITY – NIKOLA TESLA		
NEW(S) SUBJECT(S):	Environmental protection and sustainable development, Environmental management, Sustainable business development; Energetic efficiency	Introduction to the theory and aesthetics of ecologically based architecture, Sustainable Development, Environmental Management Systems; Ecological modeling
		Human environment and technologies, Sustainable development in construction
FEFA UNIVERSITY		
NEW(S) SUBJECT(S):	Economic development	Sustainable Development
METROPOLITAN UNIVERSITY		
NEW(S) SUBJECT(S):		
		Risk and environmental impact assessment, Environmental risk modeling, Environmental risk management, Environmental security system, Pollutants from industrial averages, Hazard and environmental disasters, Environmental management system, International environmental law and policy, Global environmental and security monitoring, Science of Climate Change, Socio-Economic Aspects of Climate Change, Climate Change and Biodiversity Conservation, Risk Management in Accordance with Climate Change, Application of Ecological Modeling, Statistics and Processing of Climate Data, Climate Change and Energy Technologies, Adaptation and Mitigation of Climate Change; Application of ecological modeling
		Methodology of scientific research, Environmental problems and its degradation, Sustainable development, Sustainable energy, Human ecology, Environmental hazard management, Environmental economics, Experimental testing of environmental processes, Sustainable development in local communities and protected areas, Protection, conservation and improvement of bioresources; Characterization and quantification of pollutants in the environment
EUROPEAN UNIVERSITY		
NEW(S) SUBJECT(S):	Ecological tourism	

Source: Author's personal table

The *second* observation that the authors single out concerns the **increased number of syllabi** of subjects in which the notion of sustainable development is explicitly mentioned. To a greater extent, the concept of sustainable development is present in the syllabi of subjects in Sociology at the Faculty of Philosophy, but they are increasingly noticed and recognized in other Departments. A similar situation is visible at the Faculty of Economics, Law, Pedagogy, Philology and Arts, Faculty of Political Science, Faculty of Security, Faculty of Sports and Physical Education, and especially at the Faculty of Environmental Protection. Here are some examples of new subjects that provide education for sustainable development (this is the Faculty of Environmental Protection): *Fundamentals of protection systems, Sociology, Protection economics, Technological systems and protection, Chemical parameters of work and environment, Energy processes and environment, Electromagnetic radiation in the environment, Waste management, Ecology, Environmental chemistry, Information technology in protection, Communal systems and environment, Environment and health, Industrial*

*ecology, Noise in the environment, Spatial planning and environmental protection, Indicators of quality of work and environment, Environmental protection and insurance, Environmental risk, Sustainable development, Environmental impact assessment* within which the given topic is addressed.

What the authors single out as the *third* observation is that ***most of the subjects are still of an elective nature***, so that a smaller number of students listen to them. What promises and gives hope is the fact that some of the subjects that were electives have now been renamed and put on the list of compulsory subjects. So this is certainly one of the ways to make information about this complex and important phenomenon equally accessible to all students.

The authors single out another observation from the insight into the current situation - the *fourth*. Namely, it is about the fact that certain courses, although they do not deal with sustainable development, create preconditions for understanding sustainable development. Subjects in *Andragogy* are in some way indirectly related to sustainable development and create preconditions for development and understanding of the social dimension of sustainable development (eg courses Education of the Elderly, Policies and Strategies of Adult Education, etc.), as well as in *Pedagogy* (eg Civic Education Programs), in *Psychology* within the module Psychology of Work, then Urban Anthropology in Ethnology and Anthropology and others. As the authors came to this conclusion during the available content analysis, the set task should and could only be achieved by the newly set rules - and that is to use other key topics of sustainable development in the analysis, such as civil society, poverty reduction, ethics, peace, responsibilities in local and global contexts, democracy and governance, justice, security, human rights, health, gender equality, cultural diversity, rural and urban development, economy, production and consumption schemes, shared responsibilities, environmental protection, management of natural resources and biodiversity, social ecology, human environment, quality of life, environmental crisis, environmental awareness, ethics and culture, environmental policy, environmental movements, the importance of the Millennium Declaration for global peace and sustainable development. These are all topics/issues that are indirectly related to sustainable development.

From all the above, it cannot be concluded that sustainable development is adequately represented. The ***Faculty of Sports and Physical Education, University of Nis***, which is still an example of a faculty where attention is not paid to environmental problems and sustainable development, can serve as a confirmation of this statement; given that based on the insight into the existing curricula, no subject can be identified that at least addresses some of these issues. This is the situation at all levels of study<sup>8</sup>. The situation is similar at the ***Faculty of Philosophy and the Faculty of Arts*** of the same university<sup>9</sup>.

However, from all the above, the tendency of spreading the importance of sustainable development in our country is more visible, which for a start is the basis for the vision of a better future. Such insights into the presence of ideas of sustainable development in university education in Serbia show that these processes have begun, but that there is a wide space and an obvious need to significantly expand this field.

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<sup>8</sup> The only subject that can indicate the subject of our research, at least in the title, is *Activity in Nature*, which is taught in basic academic studies (source: portal of the Faculty of Sports and Physical Education in Nis: <http://www.fsfv.ni.ac.rs>).

<sup>9</sup> At these faculties it is mentioned, in almost all departments/modules within the *Pedagogy and Sociology of Education and Upbringing*. The master's academic and doctoral studies of the same faculties are designed so as not to deal with this important phenomenon at all (source: portal of the Faculty of Philosophy <http://www.filfak.ni.ac.rs/> and the Faculty of Arts in Nis: <http://www.artf.ni.ac.rs>).

#### 4. CONCLUSION

In Serbia, and we should not forget that, education for sustainable development is still more present in theory, but not in practice, which justifies the fact that it is still not sufficiently implemented in university education. This was confirmed by research on the representation of sustainable development in the syllabi of the subjects of the Faculty of Natural Sciences, University of Nis<sup>10</sup>.

The obtained results clearly indicate that the number of subjects containing the term "sustainable development" in its name has increased in the basic studies of the faculties of social sciences, so there is a larger number of subjects in which sustainable development is mentioned. However, what is worrying, and which confirms the story about the insufficient implementation of the topic of sustainable development in university education, is the fact that most of the newly mentioned subjects are most often elective.

After analyzing the situation, the question arises as to why more attention is not paid to sustainable development in university education (Prodović, 2014). There are several reasons for this. *First*, faculties are independent in creating courses and syllabi, which is why there is no comprehensive approach to creating educational content at the university level. Sometimes programs and new courses are created on the basis of the existing teaching staff and adjusted to the capacities of the lecturers, instead of designing programs for which professional staff would be planned or new ones would be developed. In order to educate as many students as possible for sustainable development, in addition to changing the syllabus, it is necessary to change the dominant approaches to education, as well as the methods and techniques of teaching and learning. The right direction for such a thing should be sought in *the knowledge economy*, in better quality education, building a system of creativity and tolerance. All this actually rests on institutions. Efforts should be made to incorporate the principles of sustainable development into as many curricula as possible, rather than treating sustainable development as a separate topic through special subjects. *Secondly*, it cannot be said that lecturers in higher education institutions have sufficient theoretical and practical knowledge about sustainable development. They are most often acquired during study and research stays at foreign faculties<sup>11</sup>. *Third*, the lack of interest in developing new knowledge and entering new fields of research is noticeable among researchers and lecturers who already have "their" subjects. As sustainable development has become part of the dominant discourse, young researchers should choose more and more topics of their doctoral dissertations in the field of sustainable development, which

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<sup>10</sup> Namely, according to Violeta Orlović Lovren, professor of the Department of Pedagogy and Andragogy at the Faculty of Philosophy, University of Belgrade, a review of the integration of sustainable development into study programs speaks of the presence of content aimed at studying sustainable development, mostly in the group of natural sciences. , Geographical, Forestry, Agricultural, Technological, Metallurgical, Architectural, Faculty of Organizational Sciences) and then, much more modestly, the Social Sciences (Political Science, Law, Faculty of Security, Philosophy) (for more details see: <https://www.cirsd.org/sr-latn/see-views/odrzivi-razvoj-na-univerzitetu-%E2%80%93-da-li-smo-spremni-za-interdisciplinarno-putovanje-u-buducnost>, last visited 15. 03. 2022). There are other researches (see: Lončar, 2011).

<sup>11</sup> A concrete example is the subject Contemporary Problems of Sustainable Development in the master's program in Sociology at the Faculty of Philosophy. Prof. is engaged in this course. Dr. Marija Babović, who spent a semester at the London School of Economics and Politics (LSE) on the South East Europe Faculty Development Program, which aims to contribute to raising teaching and research capacity universities in the region. During their stay at the LSE, visiting professors developed new and improved existing courses at their faculties, after which the creation of a master course Contemporary Problems of Sustainable Development was initiated. Also, during the development of syllabi for this subject, syllabi and literature of related subjects on LSE were consulted.

could have positive effects on the representation of these topics in undergraduate studies. *Fourth*, at the faculties of social sciences and humanities in Serbia, sustainable development is predominantly related to ecology. Lecturers often consider inadequate the question of whether and to what extent students are taught 'about' and 'for' sustainable development in the subjects they teach and refer to environmental subjects (for more details see: Nikolić, Stanković, 2016). However, education for sustainable development expands the concept of environmental education. The UNECE Strategy, adopted by Serbia, emphasizes that "education for sustainable development also includes various elements of development and other targeted forms of education." Therefore, environmental education needs to be developed and complemented with other areas of education in order to obtain an integrative approach leading to education for sustainable development. *Fifth*, the inclusion of sustainable development in education does not only require partial syllabus changes. On the contrary, deeper and more comprehensive changes are needed in understanding the role of education. At the faculties in Serbia, teaching is predominantly conducted *ex cathedra*, while education for sustainable development includes mutual learning, non-formal methods, creative methods, experiential learning, etc. However, this method of learning is inapplicable when one professor has several hundred students in a group, which is the case at most faculties of the University of Belgrade. A potentially good way to introduce students to sustainable development could be through non-formal education, although this form of learning in our faculties is underdeveloped. In that sense, the existence of the *Center for Environmental Policy and Sustainable Development* at the Faculty of Political Sciences, which is a potentially important place of education for sustainable development, is significant. Such education requires an interdisciplinary and holistic approach.

In order to improve education, Jickling and Wals propose the following changes: 1. from passive learning to exploratory learning and creative problem solving, 2. from teacher-centered education to student-focused education, 3. from individual to learning through cooperation, 4. from learning dominated by theory to orientation towards practice, 5. from simple accumulation of knowledge to orientation towards problems, 6. from learning oriented towards content to self-regulatory learning, 7. from learning from employees in educational institutions to learning with and from individuals on the side, 8. from low to higher levels of cognitive learning, 9. from emphasizing only cognitive goals to emphasizing both affective goals and skills (Jickling, Wals, 2002: 229).

We must take sustainable development seriously, because that is the only way to make changes in all areas of life - from consumer habits to awareness in the fields of economy, society and politics. Educational programs must be in the function of the future development of Serbia, which is why the model of sustainable development should have an important place in the school system.

Since the *reform of education* has started in Serbia, the process of implementing education for sustainable development in all educational cycles is underway. Education is an unavoidable factor and a precondition for economic growth and the social, environmental, cultural and ethical vision of Serbia's sustainable development. The progress of society in the future must be based on knowledge that respects the principles of sustainable development of society. Reform of the education system should improve the educational level of the population, with a clear awareness of the importance of sustainable development in the process of European integration. In a narrower sense, spreading knowledge about sustainable development is a prerequisite for decision-making, good governance, promotion of democracy, all with the aim of sustainable development. For something like that, it is

necessary to ensure the integration of knowledge from all relevant sectors (environment, economy, society). In order to establish a sustainable system and manner of education for the 21st century, the Republic of Serbia must, with a strict rationalization of the use of public funds and reform their use:

- increase investment in education to at least 6% of GDP,
- to increase the general literacy of the population,
- reduce the number of unemployed residents and yes
- harmonize the education system with the needs of the labor market and reforms, but also with the needs of future generations based on new technologies and ways of communication, as well as to improve the efficiency of the education system as a whole" (Sustainable Development Strategy).

Therefore, the Strategy recommends sustainable education in the Republic of Serbia, which must be in line with the scientific, economic and technological potential of the Republic of Serbia; accessible to all (children and members of socially vulnerable social groups); adaptable and attractive enough, in line with socio-economic changes and labor market needs; included in the European education system; modern financing based on the model of the European financing system; but also based on a system of modern management, certification, licensing and accreditation.

Two complementary strategies need to be used to implement the ideas of sustainable development through curricula and syllabi at our universities: (a) by integrating topics on education for sustainable development through all relevant subjects, programs and courses in undergraduate and postgraduate studies; and (b) by introducing and developing specific programs and courses focused on the complex issues of sustainable development. With this in mind, universities in Serbia have a task to thoroughly review programs and their contents in the light of the theory and practice of sustainable development, not only in the European Union or the state of Serbia, but also in the sectoral sense of sustainability. Because, developing positive visions of a sustainable future is a way to motivate people to seek and create sustainable lifestyles.

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- Portal of the Faculty of Law in Niš: <http://www.prafak.ni.ac.rs/>
- Portal of the Faculty of Education in Vranje: <http://www.pfvr.ni.ac.rs/>
- Portal of the Faculty of Occupational Safety in Niš: <http://www.znrfak.ni.ac.rs/>
- Portal of the Faculty of Sports and Physical Education in Niš: <http://www.fsfv.ni.ac.rs/>
- Portal of the Faculty of Philosophy in Niš: <http://www.filfak.ni.ac.rs/>
- Portal of the Faculty of Arts in Niš: <http://www.artf.ni.ac.rs/>
- Portal of the Faculty of Philosophy in Priština: <http://fifa.pr.ac.rs/>
- Portal of the Faculty of Teacher Education in Prizren: <https://uf-pz.net/>
- Portal of the Faculty of Economics in Priština: <http://ekonomski.pr.ac.rs/>
- Portal of the Faculty of Law in Priština: <https://pra.pr.ac.rs/>
- Portal of the Faculty of Arts in Priština: <https://www.art.pr.ac.rs/>
- Portal of the Faculty of Economics in Kragujevac: <http://www.ekfak.kg.ac.rs/>
- Portal of the Faculty of Law in Kragujevac: <http://www.jura.kg.ac.rs/>
- Portal of the Faculty of Teacher Education in Kragujevac: <http://www.ucfu.kg.ac.rs/>
- Portal of the Faculty of Philology and Arts in Kragujevac: <http://www.filum.kg.ac.rs/>
- Portal Faculty of Pedagogical Sciences in Kragujevac: <http://www.pefja.kg.ac.rs/>
- Portal Faculty of Pedagogical Sciences in Kragujevac: <http://www.hit-vb.kg.ac.rs/>
- Portal of the Faculty of Economics in Novi Sad: <http://www.ef.uns.ac.rs/>
- Portal of the Faculty of Philosophy in Novi Sad: <http://www.ff.uns.ac.rs/>
- Portal Faculty of Education in Novi Sad: <http://www.pef.uns.ac.rs/>
- Portal of the Faculty of Sports and Physical Education in Novi Sad: <http://www.fsfvns.rs/>
- Portal of the Faculty of Law in Novi Sad: <http://www.pf.uns.ac.rs/>
- Portal of the Faculty of Teacher Education in Novi Sad: <http://www.magister.uns.ac.rs/>
- Portal of the Academy of Arts in Novi Sad: <http://www.akademija.uns.ac.rs/>
- Portal of the Faculty of Organizational Sciences in Belgrade: <http://www.fon.bg.ac.rs/>
- Portal of the Faculty of Economics in Belgrade: <http://www.ekof.bg.ac.rs/>
- Portal of the Faculty of Law in Belgrade: <http://www.ius.bg.ac.rs/>
- Portal of the Faculty of Philosophy in Belgrade: <http://www.f.bg.ac.rs/>
- Portal of the Faculty of Philology in Belgrade: <http://www.fil.bg.ac.rs/>
- Portal of the Orthodox Theological Faculty in Belgrade: <http://www.bfspc.bg.ac.rs/>
- Portal of the Faculty of Teacher Education in Belgrade: <http://www.uf.bg.ac.rs/>
- Portal of the Faculty of Political Sciences in Belgrade: <http://www.fpn.bg.ac.rs/>
- Portal of the Faculty of Security in Belgrade: <http://www.fb.bg.ac.rs/>

<sup>12</sup> Last visit from May 1, 2020 to March 1, 2021.



Portal of the Faculty of Sports and Physical Education in Belgrade: <http://www.fsv.bg.ac.rs/>  
Portal of the Faculty of Special Education and Rehabilitation in Belgrade: <http://www.fasper.bg.ac.rs/>  
Educons University Portal in Novi Sad: <http://www.educons.edu.rs/>  
Portal of the University of Business Academy in Novi Sad: <http://www.privredna.akademija.edu.rs/>  
Portal of Singidunum University in Belgrade: <http://www.singidunum.ac.rs/>  
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Megatrend University of Belgrade portal: [www.megatrend.edu.rs/](http://www.megatrend.edu.rs/)  
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FEFA University of Belgrade portal: <http://www.fefa.edu.rs/sr/o-fakultetu/>  
Metropolitan University Portal in Belgrade: <http://metropolitan.edu.rs/>  
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## **STANJE VISOKOŠKOLSKOG OBRAZOVANJA ZA ODRŽIVI RAZVOJ U REPUBLICI SRBIJI**

*Važan deo opšteg slaganja o značaju obrazovanja u dostizanju ciljeva održivog razvoja odnosi se i na funkciju i odgovornost Univerziteta. U tom kontekstu se poslednjih godina velika pažnja posvećuje napredovanju procesa integracije održivosti na univerzitetima, koji je praćen prihvatanjem transformativnog pristupa, povezivanjem teorijskog sa praktičnim diskursom i istraživanjem novih puteva primene unutar i između naučnih disciplina. U radu će biti predstavljen koncept održivog razvoja u kontekstu obrazovanja, sa posebnim akcentom na prikaz obrazovanja za održivi razvoj u obrazovnim sistemima Srbije. U fokusu rada je analiza stanja održivog razvoja u akademskom obrazovanju u našoj zemlji. Cilj je bio da se ispita koliko je obrazovanje za održivi razvoj zastupljeno na fakultetima društveno-humanističkih nauka Univerziteta u Srbiji. Odabrana metodologija zasnivala se na sadržinskoj analizi kurikuluma i silabusa uz razgovore sa profesorima i asistentima odabranih fakulteta. S obzirom na to da su profesori identifikovani kao nosioci obrazovanja za održivi razvoj, ključ obrazovanja studenata za održivi razvoj jeste, i mora biti, u obrazovanju i kontinuiranom usavršavanju pedagoškog kadra u ovoj oblasti.*

Ključne reči: *obrazovanje, održivi razvoj, životna sredina, kurikulum/silabus, univerzitet*