

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GREEN TRANSFORMATION OF THE EU

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ABSTRACT

Based on a review of professional literature and documents (UN and UNESCO international documents, strategic documents of the Republic of Croatia), scientific literature (social ecology, interdisciplinary literature) and using a hermeneutic approach as well as analysis and comparison of available secondary data, this paper first presents and analyses the concept of EDS and then examines the issue of its implementation and representation at different levels of formal education in Croatia (first in the pre-school and school system and then in the higher education system). Finally, the results of the analysis are presented and the discrepancy between policy recommendations and strategies and practise, i.e. the implementation of CE, EDC and ESD in the Croatian educational context, is highlighted, as well as the need for changes in teacher training and the need to change or harmonise the existing educational programmes with the goals of the European “green transition”.

Keywords: European „green transition“, education for sustainable development, higher education system, pre-school and school system, sustainable development

1. INTRODUCTION

When Jeremy Rifkin wrote about “the European Dream” in 2004, he pointed out that “the European Union is the first governing institution in history to emphasize human responsibilities to the global environment as a centre piece of its political vision”¹, as well as “the first political unit to seriously entertain the new vision of the Earth as an indivisible living community deserving of respect”². Rifkin sees this

¹ Rifkin, J., *The European Dream: How European’s Vision of the Future Is Quietly Eclipsing the American Dream*, Jeremy P. Tarcher/Penguin, New York, 2004, p. 325.

² *Ibid.*, pp. 340-341.

commitment to “global environmental responsibility“, as “the emergence of a new frame of mind, for which there is no historical precedent”.³ Furthermore, Rifkin believes that a “new science” and “new Enlightenment” was being created, and sees this as fundamental to understanding of “the European Dream, with its emphasis on inclusivity, diversity, quality of life, sustainability, deep play, universal human rights and the rights of nature, and peace“.⁴ According to Rifkin, during 2004, the EU has already demonstrated its “commitment to sustainable development” (SD) and “global environmental stewardship” by promoting a series of “global environmental treaties and accords and institutionalizing the precautionary principle into its regulatory policies”.⁵ This commitment to SD is even more open and noticeable today, when we are talking about the “European Green Deal”, adopted in 2019, and according to which “all 27 EU Member States committed to turning the EU into the first climate neutral continent by 2050”.⁶

The fight against climate change, as well as the entire planned “green transition”, includes a whole series of planned activities and transformations: the plan to transform the EU economy and societies, to encourage the sustainable use of natural resources, to create greener mobility and make transport sustainable, to use clean technologies and products, to reduce the energy consumption of buildings, to increase the energy savings, etc.⁷ Moreover, the fight against climate change is recognised not only as a major challenge, but also as an opportunity to create a new economic model, which in turn “creates new opportunities for innovation, investment and jobs”.⁸ For example, “the green transition” predicts creation “around 1 million jobs in the EU by 2030, and 2 million jobs by 2050”, and those are particularly “green jobs” in the construction sector and manufacturing⁹, and in “growing green sectors such as renewable energy and energy efficiency”, but this is conditional and depends “on the availability of relevant skills and training”.¹⁰

³ *Ibid.*, p. 325.

⁴ *Ibid.*, p. 358.

⁵ *Ibid.*, p. 341.

⁶ European Commission, *European Green Deal: delivering on our targets*, 2021, available at: [https://ec.europa.eu/commission/presscorner/api/files/attachment/869807/EGD_brochure_EN.pdf], Accessed 13 June 2023.

⁷ *Ibid.*

⁸ *Ibid.*

⁹ European Commission, *A Socially Fair Transition*, 2021, available at: [<https://op.europa.eu/en/publication-detail/-/publication/e355c630-00e6-11ec-8f47-01aa75ed71a1/language-en>], Accessed 13 June 2023.

¹⁰ UN Environment Programme, *Global Guidance for Education on Green Jobs*, 2021, p. 2, 15, available at: [<https://wedocs.unep.org/20.500.11822/35070>], Accessed 10 February 2022.

In the implementation of the European Green Plan, EU citizens have a special role to play, as they are expected to participate equally and actively in the different areas of the Plan's implementation, in the green and "socially fair transition" of the EU towards a sustainable society.¹¹ In addition to the changes in transport, industry and the economy aimed at achieving climate neutrality in the EU, the green transition confronts the Union's population with a number of different challenges and changes. For example, citizens are expected to participate more in decision-making processes to strengthen "active green citizenship" and deliberative democracy; to create a "greener lifestyle" and change their consumption habits (by choosing sustainable products and developing responsible consumption as opposed to unsustainable production and consumption patterns); to acquire new knowledge and skills as workers, to meet the demands of green jobs (in construction, energy, transport and other industries, eco-innovation), and to pursue relatively new professions such as "environmental manager", "environmental consultant", "sustainable development expert", etc. Namely, for the SD of the EU and the green and socially fair transition of the EU towards a sustainable society, which includes the active participation of citizens, different forms of functional literacy are important (e.g. political, legal, digital, environmental, climate literacy, etc.), which implies not only the acquisition of different knowledge and skills, but also their understanding, linking, critical approach and application in everyday life and society.

In this sense, we can highlight the importance of environmental and climate literacy as one of the main prerequisites or assumptions and tools for understanding the fight against climate change, mastering the issue of SD and sustainability, as well as for the general understanding and active participation in the whole EU green transition. The term "ecological literacy" refers to the "knowledge of the codes for communication between humans and nature that correspond to the respective level of development".¹² Furthermore, "ecological literacy" can be explained by referring to questions such as: "What and how much do people know about the environmental problem, how is this knowledge socially distributed, how is this knowledge used in shaping everyday life and structuring public power",¹³ etc. Another term is "climate literacy" or "climate change literacy". A climate literate person: "understands the basic principles of the planetary climate system"; "knows how to obtain scientifically reliable information about climate change", and is "able to make informed and responsible decisions regarding actions that

¹¹ European Commission, *op. cit.* note 9.

¹² Cifrić, I., *Leksikon socijalne ekologije*, Školska knjiga, Zagreb, 2012, p. 96.

¹³ Kalanj, R., *Pismenost i djelovanje*. Socijalna ekologija, Vol. 5, No. 3, 1996, p. 398.

may affect the climate”.¹⁴ In other words, climate literate people are those people who “can improve the quality of life in a given area with information, knowledge and actions related to climate and climate change”.¹⁵ In addition, one can speak even more broadly of the need to develop “literacy for sustainability”.¹⁶ In short, this is all forms of functional literacy that encompass knowledge, skills, understanding, feelings, attitudes, values, and decision-making and action competence, which, together with other forms of literacy, can be considered as a prerequisite for active participation in the green transition in the EU.

Furthermore, it is important to accept and develop the societal values of sustainability (values of ecological, social, economic and political sustainability)¹⁷, as well as the European values (such as freedom, solidarity, equality, justice, human rights, etc.). Therefore, the issue of “Education for Sustainable Development” (ESD), which encompasses these different but interrelated knowledge, skills and values, has been revisited over the last thirty years both in the implementation of the European Green Plan and in various international documents and strategic programmes, as well as in the interdisciplinary scientific literature. The aim of this paper is to analyse the issue of its representation and implementation at different levels of formal education in Croatia, first in the pre-school and school system, and then in the higher education system.

2. “EDUCATION FOR SUSTAINABLE DEVELOPMENT” (ESD)

In the scientific-theoretical and normative-political, international and global context, the term SD “has been used for fifty years, and by the mid-nineties of the last century, “more than sixty definitions, interpretations and visions” could be found in the literature.¹⁸ It was firstly mentioned in the early seventies of the last century in the context of the “Club of Rome” founded in 1968 with the 1972 thesis “on the limits to growth”, then at the “Stockholm Conference” in 1972, etc.¹⁹ However, one of the most commonly used definitions is the following definition of SD given by the WCED in its 1987 report “Our Common Future”: “SD is development that meets the needs of the present without compromising the ability of

¹⁴ Lay, V., Klimatska pismenost: analiza osnovnih prepreka razvoju i širenju klimatske pismenosti. *Socijalna ekologija*, Vol. 25, No. 1-2, 2016, p. 45.

¹⁵ *Ibid.*

¹⁶ Cifrić, *op. cit.* note 12, p. 273.

¹⁷ Lay, V.; Pudak, J., Sociološke dimenzije odgoja i obrazovanja za održivi razvoj, in: Uzelac, V; Vujčić, L. (eds.), *Cjeloživotno učenje za održivi razvoj, Svezak 1*, Sveučilište u Rijeci, Učiteljski fakultet u Rijeci, Rijeka, 2008, p. 99.

¹⁸ Cifrić, *op. cit.* note 12, p. 279.

¹⁹ *Ibid.*, p. 271.

future generations to meet their own needs“, and “it contains within it two key concepts: the concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given“, as well as “idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs“.²⁰ The above-mentioned concept of SD was later adopted at the UN “Conference on Environment and SD” in Rio de Janeiro in 1992, and since “Agenda 21” as a action programme for the 21st century, one can speak about of an evolution of the concept of ESD.²¹ Namely, Chapter 36 “Promoting Education, Public Awareness and Training” clearly states for the first time that education is “crucial to promoting SD and enhancing people’s capacity to address environment and development issues” and emphasises that the implementation of formal and non-formal education is a necessary condition for, “changing people’s attitudes so that they are able to evaluate and address their concerns with a view to SD”, but also “crucial for achieving environmental and ethical awareness, values and attitudes, skills and behaviour compatible with SD, and for effective public participation in decision-making processes”.²² “Agenda 21” also emphasises the need for a “reorientation of education towards SD” and its integration “in all disciplines”, as well as the inclusion of “formal and non-formal methods and effective means of communication”.²³

Since then, ESD has become almost a first-class topic in contemporary discussions on SD, with a growing body of literature on various aspects, implementation guidelines, contents, goals, challenges its implementation causes, but also the opportunities it offers for education. Thus, the “Decade of Education for Sustainable Development” (DESD) (2005-2015) was proclaimed on UN, during which a number of “global initiatives for design and implementation” ESD were launched “as a key contribution to promoting SD in societies around the world”²⁴, and then “Sustainable Development Goals” (SDGs) of “The 2030 Agenda for Sustainable Development” were also established.²⁵ In short, the need for implementation of

²⁰ WCED, *Our Common Future. Report of the World Commission on Environment and Development*, 1987, available at: [<https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>], Accessed 8 March 2023.

²¹ Cifrić, *op. cit.* note 12, p. 271.

²² WCED, *op. cit.* note 20, p. 320.

²³ *Ibid.*

²⁴ Michelsen, G.; Welles, P. J. (ed.), *A Decade of Progress on Education for Sustainable Development. Reflections from the UNESCO Chairs Programme*. UNESCO, 2017, p. 8.

²⁵ The SDGs were adopted by all members of UN in 2015, and the 17 SDGs are as follows: 1. “No Poverty”; 2. “Zero Hunger”; 3. “Good Health and Well-being”; 4. “Quality Education”; 5. “Gender Equality”; 6. “Clean Water and Sanitation”; 7. “Affordable and Clean Energy”; 8. “Decent Work and Economic Growth”; 9. “Industry, Innovation and Infrastructure”; 10. “Reduced Inequalities”; 11.

EDS at three different but interrelated levels is recognised worldwide: first, the need for implementation within the framework of formal education in educational institutions; second, implementation within the framework of non-formal education, i.e. “outside the usual educational institutions, for example through the activities of non-governmental organisations”, and third, “through the media (newspapers, television, radio)”, so that EDS becomes “an integral part of daily life” for all of us.²⁶ In the following part of the paper, we will focus only on the analysis of the first level of implementation, i.e. the implementation of EDS in formal education in Croatia.

3. “EDUCATION FOR SUSTAINABLE DEVELOPMENT” (ESD) IN CROATIA: ANALYSIS OF THE DIFFERENT LEVELS OF EDUCATION

3.1. “Education for Sustainable Development” (ESD) in the Strategic Development Documents of the Republic of Croatia

The review of the strategic development documents of the Republic of Croatia suggests that Croatia opted for SD at the declarative level as early as 1992, when the “Declaration on Environmental Protection” was adopted, shortly before “the World Summit on Environment and Development in Rio de Janeiro”.²⁷ In the aforementioned declaration, Croatia committed itself to SD “based on sustainable agriculture, forestry, maritime economy and tourism, as well as an economy and industry based on environmentally clean technologies”²⁸. Nevertheless, the 2009 “National Strategy for Sustainable Development” should be highlighted as the most strategically important or fundamental document for Croatia’s orientation towards SD.²⁹ For the topic of this paper, it is particularly important to emphasise that this strategy, as a prerequisite for Croatia’s SD, highlights the importance and necessity of rapid and comprehensive changes in the education system, and that

“Sustainable Cities and Communities”; 12. “Responsible Consumption and Production”; 13. “Climate Action”; 14. “Life Below Water”; 15. “Life on Land”; 16. “Peace, Justice and Strong Institutions”; 17. “Partnerships for the goals”. UN, *Transforming Our World: The 2030 Agenda for Sustainable Development*, 2015, available at:

[<https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>], Accessed 9 March 2023.

²⁶ Mićanović, M. (ed.), *Obrazovanje za održivi razvoj: Priručnik za osnovne i srednje škole*. Agencija za odgoj i obrazovanje, Zagreb, 2011, p. 26.

²⁷ Matešić, M., *Principi održivog razvoja u strateškim dokumentima Republike Hrvatske*, Socijalna ekologija, Vol. 18, No. 3-4, 2009, p. 324.

²⁸ *Ibid.*

²⁹ *Strategija održivog razvitka Republike Hrvatske*, Narodne novine br. 30/2009, available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2009_03_30_658.html], Accessed 9 March 2023.

education is highlighted as a prerequisite for “achieving SD because it contributes to greater social cohesion and well-being by investing in social capital, creating equal opportunities, especially for those in a less favourable position, and involving the public”.³⁰ Furthermore, the above-mentioned strategy, and in line with the UN’s DESD identifies different themes of EDS and refers to the importance of changing and adapting “existing curricula at all levels of formal education” to include, to a greater extent, “principles and values of sustainability and the interdisciplinary interpenetration of its three components” (that is, social, economic and ecological component).³¹ Then, the document “Strategic Framework for Development 2006-2013” is worth highlighting, in which SD is emphasised as a priority to be fulfilled, and people, knowledge and education, along with other strategic areas, are highlighted as integral and indispensable to its realisation³². However, despite this strategic documents there were no intention “to include SD in education programmes” for the same period in the document “Development Plan for the Education System for 2005-2010”, which should follow them in terms of implementation.³³

Then, the “National Development Strategy of the Republic of Croatia until 2030” should be highlighted as the currently relevant, basic strategic document for Croatia’s orientation towards SD.³⁴ This strategy defines “priorities for the long-term SD of the country”, sets goals that are in line with the “European Green Plan” and highlights “investment in people” as a strategic development factor.³⁵ It also highlights four development directions of Croatia until 2030: firstly, “sustainable economy and society”, secondly, “strengthening crisis resilience”, thirdly, “green and digital transition” and fourthly, “balanced regional development”.³⁶ In contrast to the 2009 Strategy, the 2021 Strategy does not mention ESD, but emphasises the importance of education, and “educated and employed people” are seen as key prerequisites for achieving SD in Croatia.³⁷ The importance of education at

³⁰ *Ibid.*

³¹ *Ibid.*

³² Vlada Republike Hrvatske, *Strateški okvir za razvoj 2006-2013*, 2006, available at: [https://razvoj.gov.hr/UserDocsImages//arhiva/Publikacije//Strateski_okvir_za_razvoj_2006_2013.pdf], Accessed 9 March 2023.

³³ Ministarstvo znanosti, obrazovanja i športa, *Plan razvoja sustava odgoja i obrazovanja*, 2005, available at: [<https://vlada.gov.hr/UserDocsImages/2016/Sjednice/Arhiva/85-05a.pdf>], Accessed 10 March 2023.

³⁴ *Nacionalna razvojna strategija Republike Hrvatske do 2030. godine*, Narodne novine NN 13/2021, available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2021_02_13_230.html], Accessed 9 March 2023.

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.*

all levels and the promotion of lifelong learning are emphasised, as well as the acquisition of basic and vocational competences, with a focus on the development of entrepreneurial and digital competences.³⁸ Unfortunately, unlike the 2009 Strategy, this strategy does not mention the importance of ESD nor does it highlight climate and environmental literacy as important forms of functional competence, which can be seen as a potential shortcoming, given that the green and digital transformation has been identified as a development direction and education is expected to “achieve greater alignment of workers’ competences with labour market needs” in line with its realisation and the achievement of a sustainable economy and society³⁹. The implementation of the above strategy in the education sector is defined in the “National Plan for the Development of the Education System for the Period up to 2027”.⁴⁰ It clearly states that “the transition to a new digital and green economy requires exceptional investment in people” so that they can be the agents of various changes and social and economic programmes; they should acquire “adequate competences (knowledge, skills and educated attitudes)” and that “education and training” are key “for personal, civic and professional development, social cohesion, economic growth and innovation, and the basis for a more sustainable future”.⁴¹ The “National Plan” also contains measures that contribute to the SDGs, including Goal 4, which is to “ensure inclusive, quality and equitable education and promote lifelong learning opportunities for all”, and Sub-Goal 4.7, which is to ensure that by the end of 2030 “all learners acquire the knowledge and skills needed to promote SD, including, among others, ESD and sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship and respect for cultural diversity, and the contribution of culture to SD.”⁴² After this brief overview of strategically important documents in which Croatia has opted for SD as well as for ESD, we can therefore only conclude that we cannot allow the focus on sustainability to remain only at the declarative level and that it is necessary to continuously monitor their implementation and their application in practise.

³⁸ *Ibid.*

³⁹ *Ibid.*

⁴⁰ Ministarstvo znanosti i obrazovanja, *Nacionalni plan razvoja sustava obrazovanja za razdoblje od 2021. Do 2027. godine*, 2023, available at: [<https://mzo.gov.hr/UserDocsImages/dokumenti/Obrazovanje/AkcijскиiNacionalniPlan/Nacionalni-plan-razvoja-sustava-obrazovanja-za-razdoblje-do-2027.pdf>], Accessed 10 March 2023.

⁴¹ *Ibid.*

⁴² *Ibid.*

3.2. Implementation of “Education for Sustainable Development” (ESD) in the pre-school and school system

Although the above-mentioned strategic development documents of the Republic of Croatia recognised the importance of ESD as early as 1992, based on a literature review it can be argued that ESD is not systematically implemented in Croatia, i.e. its contents are implemented, but only partially and inconsistently. The implementation of ESD in pre-school and school education in Croatia in the last decades can be placed in the framework of the implementation of “Civic Education” (CE) as well as “Education for Democratic Citizenship” (EDC), therefore the following pages of the paper will first present and analyse some research results and conclusions on their implementation. It must be emphasised, however, that this is not peculiar to Croatia, as many education systems in the world address the topic of “environmental protection or education for ecological sustainability“, within the framework of CE.⁴³

The importance and necessity of implementing CE and EDC in Croatia has been emphasised in public debates since the mid-1990s of the 20th century, and the “National Programme for Human Rights Education” was adopted in 1999, which included “pre-school education, classroom teaching and subject teaching” in primary and secondary schools. Still, this programme was “never systematically implemented”, while some activities were partial, inconsistent and carried out “by different actors”⁴⁴. Since then, various laws, strategies and plans in the field of primary and secondary education have been amended and adopted, such as the 2012 “Decision on the experimental implementation of the Civic Education Curriculum in 12 Primary and Secondary Schools in the Republic of Croatia” (after two years this decision was abandoned), and instead of introducing CE as a separate subject, “interdisciplinary teaching and a new curriculum were introduced” in 2014.⁴⁵

Namely, in 2011, the “National Framework Curriculum” was developed, focusing on student achievement (learning outcomes) and the development of basic student competencies such as communication in mother tongue and foreign languages, mathematical, digital and entrepreneurial competences, social and civic

⁴³ Schulz, W.; Ainley, J.; Losito, J. F. B.; Agrusti, G.; Friedman, T., *Postati građani svijeta koji se mijenja* Springer Open, Amsterdam, 2018, p. 5, available at: [<https://www.ncvvo.hr/medunarodna-istrzivanja/iccs/>], Accessed 01 April 2023.

⁴⁴ Baketa, N.; Čulum, B., *Građanski odgoj i obrazovanje u kontekstu visokoškolskog obrazovanja*. Centar za mirovne studije, Kuća ljudskih prava, Zagreb, 2015, p. 8.

⁴⁵ *Ibid.*

competences, “learning how to learn”, etc.⁴⁶ That Curriculum also pays special attention to the following educational values: “knowledge, solidarity, identity and responsibility”.⁴⁷ These educational values are also of great importance for ESD. Thus, the values of “knowledge, education and lifelong learning” are recognised as “fundamental driving forces for the development of Croatian society and each individual”; the value of solidarity refers to the “systematic education of children and young people in sensitivity towards others, the family, the weak, the poor and the disadvantaged, care between generations, their environment and the whole living environment”; the value of building the “personal, cultural and national identity of the individual” implies respect for the identity of others and respect for diversity, while the value of responsibility implies the promotion of the active participation of “children and young people in the life of society” and the promotion of their “responsibility towards the general social welfare, nature, environment, and work, as well as towards themselves and others”.⁴⁸ In addition, the following cross-curricular themes are defined as “compulsory in all subjects and all educational activities in school are obliged to implement them”: “Personal and social development; health, safety and environmental protection; learning how to learn; entrepreneurship; use of information and communication technology” and CE.⁴⁹ From the aforementioned list of cross-curricular themes, it is clear that CE is becoming a cross-curricular theme, but also that ESD can be identified in each of the themes mentioned, which is relevant to its implementation and enables its realisation in all areas of education.⁵⁰

However, as an example of good practices in the implementation of CE as a separate subject, the city of Rijeka can be mentioned, where since the 2016/2017 school year it has been possible for pupils in grades 5 to 8 of primary school to attend CE as a separate subject, i.e. as an extracurricular activity.⁵¹ For this purpose, two handbooks for pupils were prepared and this “Rijeka model” was adopted by some other cities and counties. To illustrate the importance of implementing CE in the context of the ESD, we can note that in the 5th and 6th grade handbook, the concepts of ecology and SD are discussed, as well as the issue of separating

⁴⁶ Ministarstvo znanosti, obrazovanja i športa, *Nacionalni okvirni kurikulum za predškolski odgoj i obrazovanje, te opće obvezno i srednjoškolsko obrazovanje*, Zagreb, 2011, available at: [http://mzos.hr/datoteke/Nacionalni_okvirni_kurikulum.pdf], Accessed 11 March 2023.

⁴⁷ *Ibid.*, p. 22.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*, p. 42.

⁵⁰ Mićanović, *op. cit.* note 26, p. 27.

⁵¹ Jeknić, R.; Čop, B., The youth (un)employment in the era of greeneconomy - some aspects of the problem, In: Kopal, R., Samodol, A.; Buccella, D. (eds.), *Economic and Social Development: Book of Proceedings*, Zagreb, 2022, pp. 279-280.

and classifying waste.⁵² In addition, the 7th and 8th grade handbook discusses the concepts of SD and environmental protection, as well as the green entrepreneurship, socially responsible entrepreneurship, etc.⁵³

Based on the literature presented in this part of the paper, it can be argued that there has been no systematic inclusion of content related to EDC and human rights as mandatory in primary and secondary schools in Croatia in the last decades⁵⁴, but some activities, contents and topics related to EDC have been implemented in a cross-curricular, partial and inconsistent way. Following the adoption of the 1999 “National Programme for Human Rights Education”, human rights education “became a compulsory subject in pre-school, while in primary and secondary education it was” not enshrined as a separate subject” but was implemented through “a range of subjects and projects”⁵⁵. The public discussion then focused on the inclusion of the content of EDC as an integrative component of all subjects, and the inclusion of the content of EDC as an integral part of the subject that would be called CE.⁵⁶ However, it should be emphasised that EDC contains elements of CE, but it is a broader, so-called “umbrella concept” and the term covering many areas (“civic education, political education, education for peace, education for the environment, education for human rights and education for life in the community”)⁵⁷, and pays particular attention to the different types of education in the context of lifelong learning, as well as different forms of education (formal and informal education and activities of individuals)⁵⁸. In addition, the EDC includes a number of “concepts/values”, among which, some of the most important are: human rights and freedoms, democracy, citizens, civil society, globalisation, sustainable development, as well as the development of various basic and socially important skills and competencies such as “adherence to the principle of sustainable human development in terms of a balance between social development, environmental protection and economic growth”.⁵⁹

⁵² Golub, L. (ed.), *Učenik građanin: Priručnik za Građanski odgoj i obrazovanje za 5. i 6. razrede*. Grad Rijeka, 2017, pp. 62-65.

⁵³ Golub, L.; Pašić, M. (eds.), *Učenici građani: informirani, aktivni i odgovorni. Priručnik za Građanski odgoj i obrazovanje za 7. i 8. razrede*. Grad Rijeka, 2018, pp. 26-27, 34-35.

⁵⁴ Batarelo, I.; Čulig, B.; Novak, J.; Reškovac, T.; Spajić Vrkaš, V., *Demokracija i ljudska prava u osnovnim školama*, Centar za ljudska prava, Zagreb, 2010, p. 17.

⁵⁵ *Ibid.*

⁵⁶ Dürr, K.; Spajić-Vrkaš, V.; Ferreira Martins, I., *Učenje za demokratsko građanstvo u Europi*, Centar za istraživanje, izobrazbu i dokumentaciju u obrazovanju za ljudska prava i demokratsko građanstvo, Filozofski fakultet, Zagreb, 2002.

⁵⁷ *Ibid.*, pp. 28-29.

⁵⁸ *Ibid.*, p. 24.

⁵⁹ *Ibid.*, pp. 84-86.

In addition, some of the conclusions of the 2009 research conducted with the aim of examining “the methods and effects of implementing democratic citizenship education in primary schools at the national level” are presented.⁶⁰ In particular, the conclusion that textbooks “insufficiently promote civic activism and action for the common good (local community, school)”, which is considered “a basic prerequisite for the development of responsible and active citizens”⁶¹, as well as the conclusion that “the contents of democratic citizenship education” are implemented, but in a “sporadic and optional manner”, and that their implementation depends on the affinities and personal engagement of individual teachers and principals.⁶²

Although educational policies regarding the implementation of CE and EDC at different levels of education in Croatia were constantly changing, considerable progress has been made in this long period of time, and the scientific research and literature on these topics in the context of Croatian society has increased in number. Therefore, we will highlight only one segment from that literature related to the importance and implementation of the environmental component of civic competences.

According to the 2012 “Civic Education Curriculum” (CEC), civic competence refers to “a particular type of knowledge, skills, attitudes, values and behaviour that ensure the successful fulfilment of a civic role for an individual”, and refers to competences which are generally developed “through school and extracurricular activities and, in particular, through civic education and training”⁶³. Civic competences are divided into “functional and structural dimensions”, where “the functional dimension consists of three interrelated and interdependent components: civic knowledge and understanding, civic skills and abilities, civic values and attitudes”, while the structural dimension consists of the following six components: “human-legal, political, social, (inter)cultural, economic and environmental”.⁶⁴ The “environmental component” refers to “the promotion of SD, the rational and responsible use of natural resources at all levels, the understanding of global interdependence in preserving the planet, and adherence to a holistic approach to SD”.⁶⁵

⁶⁰ Batarelo *et al.*, *op. cit.* note 54, p. 17.

⁶¹ *Ibid.*, p. 39.

⁶² *Ibid.*, p. 95.

⁶³ Spajić-Vrkaš, V., (*Ne*)*Moć građanskog odgoja i obrazovanja*, Nacionalni centar za vanjsko vrednovanje obrazovanja, Zagreb, 2015, p. 28.

⁶⁴ *Ibid.*, pp. 28-29.

⁶⁵ *Ibid.*, p. 29.

In the following, some findings and conclusions are presented on the results of the implementation of the above-mentioned CEC in 12 primary and secondary schools in the school year 2012/2013. In particular, it is interesting to underline that according to the data collected on the degree of achievement of the results of the different components of the “structural dimension“ of the CEC, teachers paid most attention to the environmental component (57% of teachers estimated that they had achieved “a lot and very much” while they paid significantly less attention to the economic dimension (19.8% of teachers estimated that they had achieved “a lot and very much”) and the political dimension (17% of teachers estimated that they had achieved “a lot and very much”).⁶⁶ In summary, it can be concluded that the results in the ecological component were achieved more than in the other components of the “structural dimension”, while the results in the “skills and abilities” component were achieved more than in the other components of the “functional dimension”.⁶⁷

Then, from the 2019/2020 school year, an experimental programme called “School for Life” will be introduced and implemented. A total of 74 schools from all counties in Croatia have participated in that programme, which corresponds to a sample of 5% of schools out of a total of 1,311 schools in Croatia.⁶⁸ The experimental programme included seven of the following cross-curricular themes: “Civic education; sustainable development; health; personal and social development; learning how to learn; use of information and communication technologies; entrepreneurship”.⁶⁹ The report on the implementation of that programme shows that when listing the cross-curricular themes most likely to be included in the curriculum, “the theme most frequently mentioned as a first choice and priority by school principals and teachers” is CE for 35.3% of respondents, while “cross-curricular themes such as entrepreneurship (2.2%) and the use of information and communication technology (4.3%) were the least represented as first choices”.⁷⁰ The results of the “International Civic and Citizenship Education Study” (ICCS) of the “International Association for the Evaluation of Educational Achievement“, can also be interpreted in this sense.⁷¹

⁶⁶ *Ibid.*, p. 197.

⁶⁷ *Ibid.*, p. 240.

⁶⁸ Karajić, N.; Ivanec, D.; Geld, R.; Spajić – Vrkaš, V., *Vrednovanje eksperimentalnoga programa Škola za život u školskoj godini 2018./2019. Objedinjeno izvješće*, Filozofski fakultet u Zagrebu, Zagreb, 2019, p. 45.

⁶⁹ *Ibid.*, p. 90.

⁷⁰ *Ibid.*

⁷¹ Schulz *et al.*, *op. cit.* note 43.

The ICCS study examines pupils' knowledge and understanding of CE concepts and topics, as well as their perceptions, attitudes and beliefs about some current issues and problems in society. These data are supplemented by data collected from their teachers and principals. The 2016 survey was conducted on nationally representative samples in 24 countries, i.e. on a total sample "of 94 000 eighth year school pupils, 37 000 eighth year school teachers and their principals from a total of 3 800 schools"⁷², while in Croatia "about 4 000 eighth year school pupils, about 3 000 eighth year school teachers, and 176 principals of primary schools" participated in the survey.⁷³ In the ICCS study, pupils' knowledge is measured by using a "civic knowledge scale" that reflects the range of knowledge at four levels of complexity, from "simplest to most complex", i.e. from D as the simplest level to A as the most complex and highest level of knowledge.⁷⁴ According to the average ICCS 2016 results, "3% of pupils showed knowledge below level D, 10% of pupils reached level D, 21% of pupils reached level C, 32% reached level B", while 35% of pupils reached level A, indicating an increase in the average score of pupils' civic knowledge compared to the same survey conducted in 2009.⁷⁵ The average results for Croatia are as follows: "0% of students had knowledge below level D, 4% of students had knowledge at level D, 20% of students reached level C, 40% reached level B", while 36% of students reached level A.⁷⁶ In other words, with an average score on the scale (531), students in Croatia achieved a significantly higher average of correct answers than the international average of the ICCS 2016 (517), which is undoubtedly encouraging data.⁷⁷ Furthermore, the next ICCS survey was conducted in 2022, but the results of this survey are not yet publicly available.

ing to note that among the topics they "learned a lot or very much at school" in CE, the highest percentage of pupils, according to the ICCS 2016 average results, 81%, chose the topic "how to protect the environment (e.g. by saving energy or recycling)", while pupils in Croatia are statistically significantly above this average, with as many as 91% of them choosing this topic.⁷⁸ The other topics show greater differences which indicates that different topics are considered important in learning CE at school in different countries.⁷⁹In addition, "pupils' perceptions

⁷² *Ibid.*, p. 9.

⁷³ Elezović, I, *Provedba i metodologija ICCS-a 2016. u Republici Hrvatskoj*, available at: [https://www.ncvvo.hr/wp-content/uploads/2017/11/1_ICCS2016_InesElezovic_Metodologija_7-11-2017.pdf], Accessed 03 April 2023.

⁷⁴ Schulz *et al.*, *op. cit.* note 43, p. 21.

⁷⁵ *Ibid.*, p. 21.

⁷⁶ *Ibid.*, p. 63.

⁷⁷ *Ibid.*, p. 61.

⁷⁸ *Ibid.*, p. 174.

⁷⁹ *Ibid.*, p. 173.

and awareness of problems related to global citizenship and SD” were examined, with pupils being presented with various problems whose severity they rated from as “very serious” to “not a serious problem”.⁸⁰ According to the ICCS 2016 average results, the majority of pupils consider “environmental pollution” (76%), “terrorism” (66%), “water scarcity” (65%), “food scarcity” (62%), “infectious diseases” (59%), “climate change” (55%) and “poverty” (53%) to be very serious threats to the future of the world.⁸¹ The majority of Croatian pupils, in addition to the problems mentioned above, also mention “unemployment” (57%), “the global financial crisis” (55%) and “crime” (53%), while “climate change” is mentioned by 47% of pupils.⁸²

For comparison, the assessment of “climate change” is significantly higher than the average recognized in some countries such as Belgium, Norway, Sweden, Denmark and Finland, as is the assessment of “environmental pollution” (with the exception of Finland), while in these countries, for example, “infectious diseases”, “poverty”, “unemployment”, “world financial crisis”, “crime”, “violent conflicts” and “energy shortage” are recognised as problems significantly lower than the ICSS 2016 average. This finding undoubtedly confirms the “influence of local context” on pupils’ perceptions of threats to the future of the world, as well as the conclusion that students in “more developed European countries” identify “climate change and pollution” as the biggest global problems and threats, while in “developing countries” they identify “poverty and violent conflict” as the biggest global problems and threats.⁸³

3.3. Implementation of “Education for Sustainable Development” (ESD) in the higher education system

In professional and scientific literature on ESD, teachers are highlighted as key actors for the necessary changes both in education systems and more generally for achieving the global SDGs and transforming the whole world towards global sustainability. For example, according to UNESCO “education is at the heart of our efforts to adapt to change and transform the world in which we live”.⁸⁴ Furthermore, education is recognised as “both a goal in itself and a means to achieve all the other” SDGs, and “it is not only an integral part of sustainable development,

⁸⁰ *Ibid.*, p. 133.

⁸¹ *Ibid.*, p. 135.

⁸² *Ibid.*, pp. 135, 137.

⁸³ *Ibid.*, pp. 133, 135, 137.

⁸⁴ UNESCO, Rethinking Education. Towards a global common good?, Paris, 2015, p. 3, available at: [<https://unevoc.unesco.org/e-forum/RethinkingEducation.pdf>], Accessed 9 March 2023.

but also an important enabler of it”.⁸⁵ Finally, as stated earlier in the paper, education is explicitly articulated as a SDG 4, and a sub-goal 4.7.

In this sense, we can refer to the fact that at the time of the previously presented ICSS 2016, CE was not a compulsory part of the basic studies for teachers in Croatia, but it was possible to choose CE as part of the professional development programmes for teachers.⁸⁶ Regarding the possibility of choosing such programs for teachers before or during the teaching of CE, according to the ICSS 2016, the highest percentages are recorded “for the topics of peaceful conflict resolution” (65%), “responsible use of the Internet” (61%), “critical and independent thinking” (61%), “citizens’ rights and responsibilities” (59%), “environment and environmental sustainability” (58%) and “human rights” (58%).⁸⁷ Nevertheless, in Croatia “less than half of teachers reported that they had not participated in professional development activities that included the topics mentioned”.⁸⁸ It is interesting to emphasize that according to the average results of the ICSS 2016 survey, “the majority of teachers felt excellent or well prepared for teaching almost all the topics and skills included in this question”, which cannot be said for teachers in Croatia, as they felt this way only for three teaching topics (“responsible use of the internet, critical and independent thinking and peaceful conflict resolution”), while on all other topics, teachers expressed such a feeling of excellent preparedness well below the international average of the ICSS 2016, including the topic “environment and environmental sustainability”.⁸⁹ At the same time, it is not unimportant to highlight the fact that according to the international average results of the ICSS 2016, the three goals that “teachers consider most important in relation to the implementation of CE” are: “promoting students’ critical and independent thinking (61%), promoting knowledge of citizens’ rights and duties (55%) and promoting concern for the environment and its protection (51%)”, and the same goals were recognised as the most important by teachers in Croatia.⁹⁰

In this context, this part of the paper examined the curricula of Croatian universities for the academic year 2022/ 2023 in order to determine the extent to which CE as well as EDC is studied as part of the basic curriculum for teachers in Croatia. The analysis of the curricula for teacher studies at the six Croatian universities (University of Rijeka, Pula, Zagreb, Osijek, Zadar and Split), which can be found

⁸⁵ UNESCO, *Education for Sustainable Development: Learning Objectives*, 2017, p. 1, available at: [<http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>], Accessed 8 March 2023.

⁸⁶ Schulz *et al.*, *op. cit.* note 43, p. 39.

⁸⁷ *Ibid.*, p. 39.

⁸⁸ *Ibid.*

⁸⁹ *Ibid.*, p. 178.

⁹⁰ *Ibid.*, p. 38.

on the websites of these universities, indicates that CE is still not a compulsory part of the basic curriculum for all teachers in Croatia. For example, CE is taught as a compulsory course at the Faculty of Teacher Studies in Gospić, at the Integrated Undergraduate and Postgraduate Teacher Studies Programme entitled “Civic Competence”⁹¹; in the Integrated Undergraduate and Postgraduate Teacher Studies Programme with Lifelong and Adult Education at the Faculty in Čakovec, the compulsory course is “Human Rights Education”⁹²; at the Faculty of Education in Pula, there are two compulsory courses: “Civic Education”⁹³ and “Civic Education in the Croatian and European Context”⁹⁴. In addition, CE is offered as an elective course entitled “Introduction to Civic Education”⁹⁵ as part of the Integrated Undergraduate and Postgraduate Teacher Education Programme at the University of Split. At other teacher education programmes we did not find courses that corresponded to the CE in the title of the course or in their curricula. On the one hand, this information shows that in relation to teacher education ten years ago, the need to teach future teachers for the implementation of CE was recognised, but on the other hand, this information also warns us that there is still a need to systematically point out the obligation of this content in formal teacher education (where it is optional) and the need to introduce such courses (where it is still not taught).

This part of the paper presents some more data on the representation of the content and learning outcomes of ESD in teacher education programmes in Croatia. For this purpose, a qualitative analysis of the content of all teacher education programmes at all six above-mentioned universities in Croatia was conducted in 2021.⁹⁶ According to this study, the contents of ESD are present in a total of 21

⁹¹ Učiteljski studij u Gospiću, Sveučilište u Zadru, available at: [<https://nstgospic.unizd.hr/studijski-program/uciteljski-studij-2022-2023/2-semestar>], Accessed 8 April 2023.

⁹² Učiteljski studij u Čakovcu, Sveučilište u Zagrebu, available at: [<https://www.ufzg.unizg.hr/wp-content/uploads/2023/01/Integrirani-sveučilišni-preddiplomski-i-diplomski-uciteljski-studiji-scjelozivotnoim-obrazovanjem-i-obrazovanjem-odraslih.pdf>], Accessed 8 April 2023.

⁹³ Fakultet za odgojne i obrazovne znanosti u Puli, available at: [<https://fooz.unipu.hr/fooz/predmet/goo>], Accessed 8 April 2023.

⁹⁴ Fakultet za odgojne i obrazovne znanosti u Puli, available at: [<https://fooz.unipu.hr/fooz/predmet/np02>], Accessed 8 April 2023.

⁹⁵ Učiteljski studij na Filozofskom fakultetu, Sveučilište u Splitu, available at: [https://www.ffst.unist.hr/studiji/integrirani_preddiplomski_i_diplomski_uciteljski_studij], Accessed 8 April 2023.

⁹⁶ Vukelić, N.; Čekolj, N.; Gregorović Belaić, Z., Zastupljenost održivog razvoja u studijskim programima učiteljskih studija u Hrvatskoj, In: Kovač, V.; Rončević, N.; Gregorović Belaić, Z. (eds.), *U mreži paradigmi: Pogled prema horizontu istraživanja u odgoju i obrazovanju*, Filozofski fakultet Sveučilišta u Rijeci, Rijeka, 2021, p. 153.

courses in all the study programmes examined.⁹⁷ However, when “analysing the content, objectives and outcomes of the courses in terms of the dimensions of SD” (the environmental, social and economic dimensions), the researchers conclude that the “environmental and social dimensions dominate”.⁹⁸ Most courses, namely 8, are “exclusively focused on the social dimension of SD” (which includes courses related to CE); 6 courses are focused on the “environmental dimension” of SD; none are focused only on the “economic dimension” of SD and 2 courses include the environmental and social dimensions of SD.⁹⁹ Furthermore, only 5 courses include all dimensions, and only in them, the economic dimension of SD is represented.¹⁰⁰ As an example of good practise, the researchers point to the teacher training programme at the University of Split, as it offers the largest total number of courses in which SD is taught (11 courses in total) compared to the other faculties studied.¹⁰¹ The above should be interpreted in the context of the fact that only at the Integrated Undergraduate and Graduate University Teacher Study, at the University of Split, there is a special module entitled ESD¹⁰², which brings together a group of different courses in this field, and this simply means that students who master this module are qualified to teach the subject of ESD in higher classes of primary school after completing their studies. Based on their analysis, the researchers also conclude that most courses “focus exclusively on raising students’ awareness and acquiring knowledge” regarding sustainability and SD, while the focus on “preparing (future) teachers” to implement ESD, on the other hand, is completely left out, which is why they conclude that existing formal education does not sufficiently prepare the future teachers in Croatia for the challenging role of implementing ESD while working in schools.¹⁰³

The researchers came to the same conclusion by conducting a survey of 335 students of the programme “Early and Preschool Education at the Faculty of Teacher Education, University of Zagreb” to investigate their views on SD.¹⁰⁴ According to the results of the aforementioned survey, students have mostly positive attitudes towards SD, with the social dimension being the most positive, followed by the educational dimension, while attitudes towards the environmental and economic

⁹⁷ *Ibid.*, p. 158.

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*

¹⁰² Učiteljski studij, *op. cit.* note 95.

¹⁰³ Vukelić, *et al.*, *op. cit.* note 96, p. 163.

¹⁰⁴ Hadela, J.; Nemet, B.; Jurčević Lozančić, A., Stavovi studenata Ranog i predškolskog odgoja i obrazovanja o održivom razvoju, In: Kovač, V.; Rončević, N.; Gregorović Belaić, Z. (eds.), *U mreži paradigmi: Pogled prema horizontu istraživanja u odgoju i obrazovanju*, Filozofski fakultet Sveučilišta u Rijeci, Rijeka, 2021. p. 169.

dimensions are still positive, but lower, compared to the first two dimensions.¹⁰⁵ Furthermore, the researchers point out the lower agreement of the students to the statement that “they have knowledge and skills to work with children in the field of environmental education” and conclude that the students surveyed, “do not feel adequately prepared for the implementation of SD during their initial training”, as well as for issues related to the environmental dimension of SD, which undoubtedly points to the next conclusion that urgent changes need to be made in their formal education.¹⁰⁶

The next important theme for ESD relates to the competences that teachers “and all those who teach about SD should develop” in order to communicate knowledge about SD more effectively¹⁰⁷. These are: “1. knowledge of the subject and understanding of the complexity of the concept: environment, society, economy” and “clear definition of goals as competences that should be developed in students”; “2. empathy”; “3. willingness to cooperate and work in teams”; “4. creativity”; “5. motivation” and “6. organisational skills”¹⁰⁸. Following the “social learning theory” which states that “people learn by observing the consequences of the behaviour of role models”¹⁰⁹, teachers who teach about SD can be seen as “models of social learning for their students” and are expected to have “attitudes and values that lead them to act sustainably”¹¹⁰. In this sense, it is interesting to highlight the results of the research whose main objective was to test “the sustainable behaviour model on a sample of student teachers” in Croatia.¹¹¹ The research was conducted “on a total of 496 Croatian student teachers enrolled in initial teacher education” at the Universities of Rijeka, Pula and Split.¹¹² This research used “a sustainable behaviour scale”, according to which the following eight factors were constructed: “1. pro-ecological behaviour”, which includes “purposeful and effective actions that lead to the conservation of natural resources”; “2. altruistic behaviour” as an integral part of “pro-ecological action”, since our actions “have an impact on the integrity and well-being of others”; “3. frugal behaviour”, the behaviour as an antithesis “to consumerism”; “4. equitable behaviour” including “intra - and intergenerational equity” and “the assessment of social, racial, economic, age and gender equity”; “5. indignation due to environmental damage”; “6. intention to

¹⁰⁵ *Ibid.*, p. 177.

¹⁰⁶ *Ibid.*, pp. 169-170, 182.

¹⁰⁷ Mićanović, M. *op. cit.* note 26, p. 59.

¹⁰⁸ *Ibid.*, pp. 59-60.

¹⁰⁹ Pennington, D. C., *Osnove socijalne psihologije*, Naklada Slap, Jastrebarsko, 2008, p. 81.

¹¹⁰ Vukelić, N.; Rončević, N. Student Teachers' Sustainable Behavior. *Education Sciences*, 11, 2021, p. 8.

¹¹¹ *Ibid.*, p. 1.

¹¹² *Ibid.*, p. 5.

act” which includes “actions such as reuse, recycling, energy conservation, etc.”; “7. affinity toward diversity” as “a tendency to prefer diversity and variations in the biophysical and socio-cultural scenarios of human life” and “8. happiness” as “an expected consequence of SD “. ¹¹³ In short, the results of this study in Croatia “suggest that student teachers’ sustainable behaviour is directly predicted by their intention to act” and that it is “both positively and significantly influenced by indignation and affinity towards diversity”. ¹¹⁴ Therefore, the researchers conclude that it is necessary to “promote pro-social and pro-ecological action” and “the development of sustainable behaviours” during teacher education if we want future teachers to become positive role models for their students and pupils. ¹¹⁵

Furthermore, it is interesting to highlight the conclusions of the study on students’ attitudes towards ESD conducted in 2010 (N = 1001) and 2016 (N = 1347) on a representative sample of students at the University of Rijeka. ¹¹⁶ According to the 2016 survey, as many as “70% of the students estimated that young people in the earlier, lower levels of education do not acquire enough knowledge about SD”. ¹¹⁷ Moreover, it can be pointed to the fact that in the same survey “as many as 53.7% of students” stated that “they did not hear and process SD issues during their studies”. ¹¹⁸ In other words, 45.3% of the students “heard some course in which the mentioned topics were dealt with” during their studies. ¹¹⁹ With regard to the results of the 2016 survey, the fact that “almost half of the students (46.1%)” believe that study programmes “should also include sustainable development content” can be highlighted as positive. ¹²⁰ According to the same study, however, even “every second student believes that SD is just another additional content” that needs to be learned and mastered. ¹²¹ Based on their studies, the researchers therefore conclude that ESD is not systematically implemented in Croatia, but depends on “motivation and training” as well as the personal commitment of the teachers themselves. ¹²²

¹¹³ Tapia-Fonllem et. al, Assessing Sustainable Behavior and its Correlates: A Measure of Pro-Ecological, Frugal, Altruistic and Equitable Actions. *Sustainability*, No. 5, 2013, pp. 712–716; Vukelić, N.; Rončević, N. *op. cit.* note 110, p. 7.

¹¹⁴ Vukelić, N.; Rončević, N. *op. cit.* note 110, p.1.

¹¹⁵ *Ibid.*, p. 10.

¹¹⁶ Buzov, I.; Cvitković, E.; Rončević, N., *Prema mogućnostima implementacije obrazovanja za održivi razvoj na sveučilištu*, Socijalna ekologija, Vol. 29, No. 1, 2020, p. 16.

¹¹⁷ *Ibid.*, p. 16.

¹¹⁸ *Ibid.*, p. 9.

¹¹⁹ *Ibid.*, p. 19.

¹²⁰ *Ibid.*, pp. 15-16.

¹²¹ *Ibid.*, p. 14.

¹²² *Ibid.*, p. 16.

At the end of this chapter, we will point out that based on a review of the literature and websites available at the time of writing, it can be claimed that there are several study programmes in Croatia that focus exclusively on SD. These are the following programmes: (1) the Međimurje Polytechnic in Čakovec offers a Bachelor's degree programme in "Sustainable Development", which focuses on the technical aspects of SD¹²³; (2) the Dag Hammarskjöld University of International Relations and Diplomacy offers a programme entitled "Sustainable Development and International Relations"¹²⁴; (3) the Bachelor's degree programme in "Sustainable Development Management" is offered at the Faculty of Tourism and Hotel Management in Opatija¹²⁵; (4) the online degree programme "Sustainable Tourism Development"¹²⁶ is offered at the same faculty; (5) at the University VERN it is possible to enrol in a professional graduate programme entitled "Sustainable Tourism Development Management"¹²⁷; (6) at the University of Zadar it is possible to enrol in a graduate programme entitled "Sustainable Tourism Development".¹²⁸ In addition, the Croatian higher education system offers different optional and compulsory courses in the field of SD. It is also worth highlighting the orientation of various higher education institutions in Croatia towards monitoring and measuring the implementation of the SDGs.¹²⁹

4. CONCLUSION

ESD is a complex and challenging topic, both because of the high range of content that encompasses the concept of SD and the concept of sustainability in general, and because of the interdisciplinarity that is necessary due to their interrelated components (society, culture, economy, politics, natural environment) and the fact that there are no universal solutions and ideas for achieving SD, nor for im-

¹²³ Raditya-Ležaić, A.; Boromisa A.; Tišma S., Komparativni pregled obrazovanja za održivi razvoj i istraživanje potreba za stručnjacima u Hrvatskoj. *Socijalna ekologija*, Vol. 27, No. 2, 2018, p. 171.

¹²⁴ *Ibid.*

¹²⁵ Fakultet za menadžment u turizmu i ugostiteljstvu u Opatiji, available at: [<https://fthm.uniri.hr/studiji/sveucilisni-prijediplomski-studij/menadzment-odrzivog-razvoja/>], Accessed 2 April 2023.

¹²⁶ Fakultet za menadžment u turizmu i ugostiteljstvu u Opatiji, available at: [<https://fthm.uniri.hr/studiji/sveucilisni-diplomski-studij/odrzivi-razvoj-turizma-online-studij/>], Accessed 2 April 2023.

¹²⁷ Sveučilište VERN' u Zagrebu, available at: [<https://vern.hr/studiji/diplomska-razina/menadzment-odrzivog-razvoja-turizma/informacije-o-studiju/>], Accessed 2 April 2023.

¹²⁸ Odjel za turizam i komunikacijske znanosti, Sveučilište u Zadru, available at: [<https://tikz.unizd.hr/studijски-programi/diplomski-studiji/odrzivi-razvoj-turizma/>], Accessed 2 April 2023.

¹²⁹ ImpactRankingsMethodologyGuide 2023, 2023, available at: [<http://www.osm.kmitl.ac.th/osm2020/file/SDG%20THE.ImpactRankings.METHODOLOGY.2023.pdf>], Accessed 22 February 2023.

plementing ESD as a global issue that is influenced by the local context in which it is applied. Furthermore, ESD is education for the present, i.e. for the critique of current unsustainable development paths, but also education for the future and for change, as it involves the search of the direction of SD in the future.¹³⁰ At the same time, the knowledge and values encompassed by ESD are constantly being created and multiplied, and everything is “new, complex, demanding, interconnected, interdependent”, while education is expected to “offer, transmit and disseminate” answers to new developmental questions.¹³¹ All this, of course, requires active and critical, sustainability literate and competent citizens, who will direct their knowledge, skills, but also their values and attitudes towards responsible action towards sustainability in all areas of human activity.

This paper analysed the implementation of ESD at different levels of formal education in Croatia, as institutional education is primarily responsible for the development of various forms of competence and literacy, while educational policy is responsible for the implementation of strategically important directives and documents by which Croatia hoped-for SD, as well as for ESD. In this sense, the paper points out the discrepancy between policy recommendations and strategies and practise, i.e. the implementation of CE, EDC and ESD at different levels of education in Croatia. It is therefore important to reiterate that it is not so important whether they are implemented as separate subjects or cross-curricular, as it is to implement them systematically and interdisciplinarily in order to link all these issues together, and that changes in educational policies do not question their implementation or make them dependent on the enthusiasm or training of individual teachers. Namely, the findings of different researches presented in this paper point to the need for changes in teacher training as they are not sufficiently trained, and do not feel competent enough to implement CE, EDC and ESD in our educational context which is in complete contrast to the policies that recognise them as one of the most important promoters of SD and key actors for achieving the SDGs.

With regard to the implementation of ESD in higher education of other faculties (not only teachers), it can be concluded that in addition to the orientation of various higher education institutions in Croatia towards monitoring and measuring the implementation of the SDGs, there is also a need to expand existing activities, continuously promote the principles of SD and open new higher education programmes and courses, as well as to include SD content in existing programmes and courses, so that education can successfully follow the changes and needs of the

¹³⁰ Mićanović, *op. cit.* note 26, p. 29.

¹³¹ Lay, V.; Pudak, J., *op. cit.* note 17, p. 103.

changing labour market and the challenges of the new green jobs and new professions, as well as to prepare students for their active participation in various other areas of the EU's "green transition" towards a sustainable society.

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