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PEDAGOGICAL APPROACHES TO SUSTAINABLE DEVELOPMENT IN SCHOOL LIBRARIES

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ABSTRACT

The aim of this paper is to analyse some of the aspects of sustainable development in Croatian school libraries within three operational groups (direct educational activity, professional library activity, cultural and public activity) in order to improve the understanding of school librarianship. The new challenges brought by the digital maturity of school institutions (primary and secondary schools, dormitories) and the new Global Goals of Sustainable Development by 2030 have influenced the change in the work tasks and activities of school librarians, which are based on inclusiveness, visual identity and sustainability of schools/dormitories both within and outside the existing frameworks of action. The positive and negative effects of school library operations were also affected by the Covid-19 pandemic. The research is quantitative, the method is an online questionnaire, and the data were statistically processed in the Statistical Package for the Social Sciences - SPSS. The results show that a large number of library professionals are not empowered with the new professional skills of sustainable development, that they cooperate with colleagues from the school regarding the implementation of activities on sustainable development, that printed materials on environmentally friendly business operation and sustainable development are ahead of electronic and digital ones, that a smaller number of librarians are involved in projects, etc.

Key words: school library, sustainable development, competencies

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Introduction

Climate change, unsafe living environment, food and water pollution, health changes and threats are all parts of human daily life. In 2015, members of the United Nations adopted sustainable development goals through the *2030 Agenda*, which should influence citizens' awareness of environmental issues and their lifelong learning (UN, 2015). European Union (2022) in the 2021-2027 financial period, through funds from the main European Fund, promotes environmental protection and sustainable development among its Member States through the cluster alliance. Accordingly, the Republic of Croatia, based on national development strategies, has prepared operational programs through which citizens and institutions will be able to apply for public tenders and withdraw funds through project proposals. These projects must be relevant, feasible and sustainable. In principle, in the context of the environment and sustainable development, the aim of the European Union's policy through projects is to prevent climate change by reducing greenhouse gas emissions, protect the environment and habitats, reduce noise, dispose of waste, prevent natural disasters and those caused by human carelessness, as well as air, water and soil pollution for the purpose of preserving health, a better quality of life for all citizens, the competitiveness of the industry of the EU Member States and the influence on global partnership.

Being in service to sustainable business (networking, providing support and promotion), there are also *clusters* at the regional, national and international levels, and they can be states, cities, institutions within them (schools, libraries, dormitories), companies, etc. (Derlukiewicz et al., 2020). The term sustainable operations in school libraries in this paper refers to the sustainability programs and projects that are carried out by library professionals through three basic activities, professional development (knowledge, skills and attitudes) on sustainability, knowledge and activities that they carry out as part of this with schoolchildren and a wider community for the purpose of constant care for the planet and human health.

Theoretical foundations

The Sustainable Development Commission states that sustainable development is the development that meets the needs of the present without

compromising the ability of future generations to meet their own needs. The concept of sustainable development can be interpreted in many different ways, but at its core, it is an approach to development that seeks to balance different and often conflicting needs in light of the ecological, social and economic constraints that society faces (Sustainable Development Commission, 2023).

In 2002, the International Federation of Library Associations and Institutions - IFLA gave the green light to library sustainable development practices for a sustainable future, especially in public libraries. Therefore, the sustainable development concept encompasses a range of activities and topics (space, management, lifelong learning, professional development, technology, artificial intelligence, circular economy, etc.) that librarians in various types of libraries around the world could engage in. Beutelspacher and Meschede (2020, 348 according to Kurbanoglu & Boustany, 2014, 49) state that the green library is a multifaceted concept with several green components: buildings, operations and practices, programs and services, information systems, and collections. Sahavirta (2019) also states something similar. Sahavirta refers to green libraries as library services such as green collections, lending non-book materials, organizing and participating in various awareness-raising events about the importance of environmental preservation, and implementing programs and projects on the same topic.

In Croatia, in 2019, the curriculum for primary and secondary schools was adopted and it included the interdisciplinary theme of Sustainable Development, which includes three sustainability dimensions - environmental, social, and economic - and their interdependence for the purpose of Connectivity, Action, and Well-being. It prepares schoolchildren for appropriate action in society in order to achieve personal and general well-being (Ministry of Science and Education of the Republic of Croatia, 2019). According to the GreenComp European Competence Framework (Bianchi, et al., 2022), the aspects of sustainability are environmental, social, cultural, and economic.

The GreenComp European Competence Framework (Bianchi, et al., 2022, p. 15-16) prescribes twelve basic green competencies for schoolchildren that should be included in all work programs in educational institutions: Sustainability Assessment, Support for Justice, Promotion of Nature, Systemic Thinking, Critical Thinking, Problem Scoping, Literacy for Future Design, Adaptability, Research-Oriented Thinking, Political Action, Collective Action, Individual Initiative. These

competencies form a unified whole. They apply to education and training at all levels (higher education, secondary education and primary education). The same competencies are also applicable to the professional development of all school staff.

The operational management of school libraries in Croatia is based on the *School's Annual Plan and Programme* and the school curriculum, which includes: direct educational activities, professional-library activities, cultural, and public activities (School library standard, 2023)¹. Under the influence of the challenges brought about by the digital maturity of educational institutions (primary and secondary schools and dormitories) (Begičević Ređep et al., 2018) and the *Global Sustainable Development Goals 2030* (UN, 2015) the operation of school librarians in Croatia is changing, based on inclusivity, visual identity, and sustainability of schools/dormitories within and beyond existing frameworks of action.

Method

The aim of the research was to gain insights into some aspects of sustainable development work in Croatian school libraries within three operational groups (educational activities, professional library activities, cultural and public activities), by a quantitative method, in order to improve the understanding of school librarianship.

Hypothesis: The school libraries in the Republic of Croatia implement sustainable practices within the three groups (direct educational activities, professional library activities, cultural and public activities).

Participants: the library professionals in the school libraries in the Republic of Croatia.

Instrument: for the purpose of this research, a Google online survey questionnaire was designed and created. It consisted of 26 closed, semi-open, and open-ended questions, as well as Likert scales.

¹ Until then, it was based on the Annual plan and program of the school library, work on alignment with the school's annual plan (Article 7) – Standard for school libraries (Official Gazette 34/2000).

Procedure: the research was conducted using a quantitative method through the Google online questionnaire for this topic at the national level of the Republic of Croatia in January/February 2022. Approval and positive professional opinion to carry out this research were obtained from the Croatian Agency for Education (Class: 602-01/22-01/26, File Nr: 561-05-02/10-22-1) and the Croatian Ministry of Science and Education (Class: 602-01/22-01/00087, File Nr.: 533-05-22-0004).

The sample included 1322 (N=100%) primary and secondary schools (Croatian, 2021/2022; Ministry, 2022), and 59 (N=100%) dormitories. The research was conducted on a voluntary basis, and participants' anonymity was guaranteed. It was taken into account that not all schools and dormitories had a school library and that some schools shared the school library. Hence, the total number of schools and dormitories does not match the number of existing school libraries, but the discrepancies are not significant. The collected data were statistically processed using the Statistical Package for the Social Sciences (SPSS).

Limitations of the research: 290 respondents, library professionals, answered the survey questionnaire. The sample is small and gives an approximate picture of the state of school library operations in the Republic of Croatia. It raises awareness and observes the direction in which the profession is developing. The school year of 2021/2022 in the Republic of Croatia was marked by the COVID-19 pandemic, during which teaching in most Croatian schools was conducted using different operation models, long-term material consequences from earthquakes in the Sisak-Moslavina County and the City of Zagreb, and various teaching models. Hence, all schools operated under difficult and changing conditions. The Ministry of Science and Education of the Republic of Croatia (2021, 8) prescribed teaching models under specific pandemic conditions: Model A: in-school teaching, Model B: mixed form of teaching (partly in school, partly remote), Model C: remote teaching. The Government of the Republic of Croatia decided to activate all models, and the competent local civil defence headquarters were the ones deciding on the implementation of an individual model (A, B, C).

Results and discussion

IFLA/UNESCO (1999) School Library Manifesto states that a school library enables schoolchildren to acquire skills for lifelong learning, develops their

imagination, and helps them become responsible citizens, including environmentally conscious citizens within the context of this paper. Within the GreenComp European Competence Framework (Bianchi, et al., 2022, 13), education is fundamentally interconnected with sustainability at all levels, as competencies are integrated throughout the curriculum. It recognizes that sustainability aspects (environmental, social, cultural, and economic) are interrelated and connected to the disciplines and subjects involved. Sustainability is the most essential competence. In line with the above-mentioned, direct educational activities in school libraries, within the context of sustainable business practices, involve collaboration with teachers through a correlational-integrative approach to interdisciplinary themes in primary and secondary schools, as well as with the educators in dormitories. It also includes practices of green literacy, conducting extracurricular activities, involvement in various projects, work in school cooperatives, and more.

Professional library activities, in the context of sustainable business practices, involve building library collections through the acquisition of eco-printed books, e-books, etc.

Cultural and public activities, in the context of sustainable and acceptable business practices, encompass promoting and advocating for the work of a green library, green photography exhibitions, poster making, (documentary) films, recycling material workshops, discussion groups, lectures, eco fairs, plant cultivation, forming and maintaining gardens in the building courtyard, student plays on ecological topics, writing blogs, etc. Therefore, in the operation of school libraries, there is interdisciplinary cooperation in the Sustainable Development curriculum. In the context of this research, educational, cultural and public activities can intertwine in the practice of work of a library professional.

Possession of environmental protection and conservation materials in the school library

Research results have shown that a large number of school libraries possess printed materials related to environmental protection and conservation (86.2%), which is a satisfactory indicator of possessing materials related to sustainable development, while 14.0% do not have such materials. Only a small number of school libraries possess electronic and digital materials (21.7%), which is not a satisfactory indicator, especially during the COVID-19 pandemic when

teaching was mainly conducted online, and school libraries operated under special work conditions.

School projects related to environmental protection and conservation

Out of 290 respondents who answered the questionnaire, 215 (74.1%) library professionals stated that during the school year 2021/2022 they did not carry out any projects related to sustainable development on a school, national, and international level via eTwinning and Erasmus+ projects, and that school library was not involved in any of existing projects or programmes for green library and/or any sustainable development related project. However, the remaining 75 (25.9%) of them were involved in such projects. This is an unfavourable indicator. 15 school libraries were involved in eTwinning projects, 7 in Erasmus+ projects, and 4 in programs and projects funded by the European Union.

One of the significant projects in which school librarians could participate was the Istrian project "Green Library," which began in 2011. Since 2015, the project has gained national importance through the action "Let's Start Green Libraries" (Lukačić, 2018, 10). However, there is still no public data on the exact number of school librarians in Croatia who accepted the Istrian initiative and became green librarians.

The research results have shown that some school libraries were involved in several projects and programs related to environmentally sustainable practices at the same time, on a school, national, and international level, through eTwinning and Erasmus+ projects, despite COVID-19 and natural disasters. A smaller number of schools and school libraries were partners in projects funded by the European Union. Some librarians have designed their own school projects which they implement in schools. However, the obtained data are not relevant.

Here are the names of the projects and programs in which librarian collaborators in Croatia were (or still are) involved in the school year 2021/2022:

School/dormitory projects: *Green Shelf (0.3%), Green Month of Croatian Books (0.3%), School Volunteer Community - Strength for Sustainable Development (0.3%), Encouraging Reading - Books on Sustainable Development and Ecology (0.3%), Participation with a Play in an Inter-municipal Waste Management Competition (0.3%), Ecological Group (0.3%), Bear Library (0.3%), 35 Years of Spiridion B Rusine School Park (0.3%), Promoting Reading through*

Sustainable Development (0.3%), Fruits and Vegetables of Our Region (0.3%), About Medicinal Herbs (0.3%), Let's Preserve the Marjan Forest! (0.3%), I Challenge You to Health (0.3%), When Little Hands Work Together, Waste Can Disappear (0.3%), the Green Story (0.3%), the Papirko (0.3%), From Plastic Caps to Expensive Medications (0.3%), Collecting Old Paper, Caps, and Batteries (0.3%), Types of Hazardous Waste (0.3%), Eco Day (0.3%).

eTwinning: Being GREEN is IN (0.3%), World into my hands (0.3%), Let the Environment Breathe by Letting Your E-waste Recycle (0.3%), Study of Art Pollution in Cities (0.3%), Sustainable Green Energy at School Education (0.3%), Green Book (0.3%), Living Greenly (0.3%), Architects of Our Sustainable World (0.3%), The Future: Our World Is in Our Hands (0.3%), Earth in Mind, EcoCentric! (0.3%), EcoTwinners at C.AMP.LIMATE (0.3%), Role Model Students (0.3%), Earth Day (0.3%), Green S.E.E.D.S (0.3%), The Sun Shines for All (0.3%), Green Consumer (0.3%), Growing Words with Reading (0.3%).

Erasmus+ Projects: Steps 2030 World (0.3%), EcoStepyouth (0.3%), EcoLexicon (0.3%), School Permaculture Garden (0.3%), Save the Future, Change the Rules (0.3%), Our Green Beginning (0.3%), SIFEC (0.3%).

EU funds: Bag of Fish - A Bundle of Health, a project of the Tourist Board from the FLAG tender of the European Union's Maritime Affairs and Fisheries Fund (0.3%), Green Classroom (Zagorje ABECEDA project under the Operational Program Competitiveness and Cohesion 2014-2020, EU funds (0.3%), Eco Fažana 2021 (tourist board project from the FLAG tender of the European Union's Maritime Affairs and Fisheries Fund), EU Rural Development Program: Reduce Food Waste (0.3%).

Associations' Projects: Eco School (a project by the association "Lijepa naša" as part of the Eco School and FeeECOCampus programs) (0.3%), Plant a Tree, Don't Be a Stump! (3.4%), Plastic Caps for Expensive Medications (a nationwide project by the Association of Leukemia and Lymphoma Patients Hull.hr), EdUTOPIA 21 (association project) (0.3%), Climate Collage (Tatavaka Association from Zlarin) (0.3%), Environmental Film Festival (project by the Green Action Association) (0.3%), With Small Green Steps - Ecological Association "Krka" Knin, Eco School (a project by the association "Lijepa naša" as part of the Eco School and FeeECOCampus programs) (0.3%).

National projects: *Youth Know Sustainability* (project by the Ministry of Education, Swiss-Croatian Cooperation Program, and the Office for Associations of the Government of the Republic of Croatia).

International-state Project: *International Eco School Project* (0.7).
FRIŠKO - *Let's Collect Old Batteries Together* (national project in collaboration with the company Friš d.o.o.).

Istrian Librarians' Project: *Green Libraries* (2.8%).

International Project: GLOBUS (sustainable development, Nansen Dialogue Center Osijek, national project by the Ministry of Education, Swiss-Croatian Cooperation Program, and the Office for Associations of the Government of the Republic of Croatia).

Ibis Grafika Publishing House Project for Kindergartens and Primary Schools: *Our Small Library* (0.7%), *A Spring, Green Step* (environmental actions at the national level).

Croatian Radio Television Project: *Most Beautiful School Garden* (0.3%).

Nobilis Environmental Protection Organization Project: *Green School: Establishing an Educational Environmental and Nature Protection Program* (0.3%).

Creative Contest: *Art(d)eko Book* (0.3%).

The research results have shown that working on these projects has empowered the pedagogical and sustainable skills of library professionals and schoolchildren. The respondents' answers were categorized into groups: acquiring knowledge about the environment and sustainable development, acquiring knowledge about project work methodology, methodology of professional pedagogical work, library resources, library promotion in the public, work with users, and other aspects.

Table 1

Personal strengthening of the library professionals' skills

Personal strengthening of the skills of respondents involved in school projects on sustainable topics	
Acquiring knowledge about the environment and sustainable development	24 respondents (7.2%) gained knowledge and broadened their horizons about the environment (resource conservation and distribution, understanding plant and animal species) and sustainable development (in the city, on the island), leading to increased ecological awareness.
Acquiring knowledge about project work methodology	21 respondents (6.3%) gained new project work experiences, personal satisfaction, recognition, improved collaboration with colleagues, and ideas for future work.
Pedagogical work methodology	11 respondents (3.3%) expanded their pedagogical work methodology through environmental content, enhancing their competencies for conducting research with schoolchildren and teachers.
Library resources	7 respondents (2.1%) obtained a richer collection of resources (environmental picture books for younger grades and furniture made from recycled materials for a reading corner).
Library promotion in the public	3 respondents (0.9%) achieved greater visibility for the library in the broader community, increased acceptance from the community, and established new contacts.
Work with library users	2 respondents (0.6%) experienced increased library visits and more borrowed books.
Other	7 respondents (2.1%) stated that they didn't get anything specific, except for additional obligations.

Out of 75 (25.9%) library professionals, who are involved in projects, 25 (7.5%) stated that schoolchildren in 10 schools and dormitories have gained knowledge about the environment and sustainable development. Eleven (3.3%) librarians reported that schoolchildren have acquired knowledge and skills for environmentally responsible behaviour. Seven (2.1%) librarians stated that schoolchildren have gained digital competencies, developed literacy, and critical

thinking on the topic of sustainable development, as well as skills for lifelong learning. Four (1.2%) librarians stated that schoolchildren have acquired new practical knowledge about the environment, new experiences and friendships, and developed creativity through play, work, and outdoor learning. Four (1.2%) librarians reported that schoolchildren have had opportunities for excursions and trips, as well as international connections with schoolchildren from other participating schools. Three (0.9%) librarians stated that schoolchildren did not receive anything in particular. Three (0.9%) librarians reported that schoolchildren have developed creativity and teamwork by using everyday items in new ways. Three (0.9%) librarians stated that schoolchildren received education related to environmental conservation, forests, staying in nature, games, and socializing.

Three (0.9%) librarians stated that schoolchildren became familiar with plant species present in the school park and gained practical experience in planting plants. In one school garden, they have as many as 32 plant species. Two (0.6%) librarians reported that schoolchildren are better informed about literature and interested in environmental topics. One (0.3%) librarian stated that schoolchildren have improved competencies for oral presentations. One librarian (0.3%) stated that their school achieved a Diamond status. One (0.3%) librarian reported that schoolchildren gained an awareness of the importance of green libraries. One (0.3%) librarian stated that schoolchildren developed a competitive spirit. One (0.3%) librarian said that schoolchildren received encouragement to care for our planet. One (0.3%) librarian stated that schoolchildren learned about nature and the environment with the support of picture books. One (0.3%) librarian reported that schoolchildren gained knowledge about projects and actively participated in the development of a sustainable local community. One (0.3%) librarian stated that schoolchildren had the opportunity to express their own personalities outside the traditional educational system. One (0.3%) librarian said that schoolchildren acquired new habits. One (0.3%) librarian reported that schoolchildren received a class award for collecting the highest number of batteries.

Table 2

Indicator of events on environmental topics in the school library

		Frequency	Percentage	Valid percentage	Cumulative percentage
Value	Yes	203	70.0	70.0	70.0
	No	87	30.0	30.0	100.0
	Total	290	100.0	100.0	

The results of the statistical analysis show that just under 3/4 of the respondents stated that the school library organizes environmental-themed events, while more than 1/4 do not. Kraljević & Afrić Rakitovac (2021, 407-408) state that libraries can play a significant role in acquiring knowledge, skills, and competencies necessary for critical thinking and action, leading to economic progress, inclusive society, and environmental preservation. Beutelspacher & Meschede (2020, 353) mention that in several German public libraries, gardening tools, musical instruments, bicycles, plant seeds, and newly grown seeds are lent, and old batteries and electronic equipment can be returned for environmentally sustainable citizen awareness. Based on this example, school libraries can also collect dead batteries and electronic equipment if they have sufficient space. Research results have shown that some library professionals follow this practice.

Using a five-point Likert scale, the study aimed to examine the differences in the personal opinions of library professionals about the importance of involving school libraries in educating schoolchildren about environmental protection and sustainable development. The research results indicate that 47.2% believe it is completely important, 34.1% find it important, 16.9% consider it moderately important, 1.4% see it as slightly important, and 0.3% consider it completely unimportant. This indicates a positive awareness among librarians regarding this topic.

Using the same Likert scale, the study sought to examine the differences in the assessment of the personal interest of library professionals in green library services in school libraries. The results show that 30.7% are very interested, 37.6% are interested, 26.6% are moderately interested, 4.1% are not interested, and 1.0% are completely uninterested. Given that library professionals are not experts in sustainable development, this response is expected.

In the context of the results obtained from the Likert scale, the European Bureau of Library, Information and Documentation Associations - EBLIDA (2020) warns that librarians must confront prejudices that assume that sustainable development goals do not concern libraries and their main mission, and that they are exclusively environmental issues. According to Horvat (2007), the professional responsibility of librarians includes personal responsibility, responsibility towards materials and users, colleagues and the profession, as well as society. Úbeda-García et al. (2021) state that employees' behaviour is crucial for improving environmental efficiency. Asiaei et al. (2021) mention that elements of green intellectual capital are green human capital, green structural capital, and green relational capital.

Moreover, 168 (57.6%) library professionals reported that they collaborate with primary school teachers of lower primary school and the teachers of various subjects, including nature, biology, geography, and physics, as well as secondary school teachers of biology, ecology, geography, and physics, along with educators who promote literacy about sustainable development. There were 105 (36.2%) respondents who reported that they do not collaborate. Twelve (4.1%) respondents mentioned that they sometimes collaborate with teachers. Two (0.7%) respondents reported collaborating with an ecology teacher because the school does not offer biology and physics in its curriculum. One (0.35%) respondent collaborates with educational rehabilitators because the school focuses on children with developmental difficulties. One (0.35%) respondent collaborates only with lower-primary school teachers. Collaborative efforts between librarians and teachers can impact the improvement of sustainable development skills and better promotion of the school/dormitory to the wider public. Possessing personal competencies while collaborating with others leads to success. The results of the research show that there is interest (self-initiated or in collaboration with colleagues) in gaining and empowering knowledge and skills. This practice is in line with the curriculum of interdisciplinary topics for Sustainable Development in schools in the Republic of Croatia. Slijepčević & Zuković (2022, 14) state that "competencies for professional advocacy include knowledge, skills, and personal traits needed for successful advocacy of a particular idea and set goal". These competencies are applicable to all professions in the educational process of educational institutions. Tokić-Zec & Mlinarević (2023, 222-223) mention that the quality of collaboration within the

institution, i.e., the quality of the school culture, influences the motivation for teachers' work and further personal lifelong work. If intrinsic motivation and values of benevolence, independence, and universalism are nurtured within the school, an environment is created where teachers recognize the values and uniqueness of the teaching profession and are more willing to elevate the profession to the level it belongs to.

The research results show that just under 1/4 (22.8%) of the respondents collaborate with environmental protection associations, while just over 3/4 (77.2%) do not collaborate. Table 3 shows that less than 1/4 of the respondents lead some extracurricular activity related to environmentally sustainable practices in their school, while 3/4 of them do not lead such activities.

Table 3

Leading extracurricular activities of library professionals related to environmentally sustainable operations

		Frequency	Percentage	Valid percentage	Cumulative percentage
Value	Yes.	22	7.6	7.6	7.6
	No.	268	92.4	92.4	100.0
	Total	290	100.0	100.0	

One of the extracurricular activities within the curriculum of interdisciplinary topics for Sustainable Development is the activity of the schoolchildren's cooperative. Extracurricular activities for them are not mandatory, and they can be led by library professionals as well. Table 4 shows that 1/4 of the respondents answered that they work in schoolchildren's cooperatives which prefer organic production and create various handicrafts from natural materials, while just under 3/4 do not.

Table 4

The work of library professionals in schoolchildren’s cooperatives that prefer organic production and the creation of various handicrafts from natural materials

		Frequency	Percentage	Valid percentage	Cumulative percentage
Value	Yes.	80	27.6	27.6	27.6
	No.	210	72.4	72.4	100.0
	Total	290	100.0	100.0	

School children’s cooperatives are a recognizable form of learning for entrepreneurship and sustainable development in Croatia and the world. They encompass all aspects of sustainable development (environmental, social, cultural, and economic) and employ various pedagogical approaches to learning and teaching. The results of statistical analyses have shown that more than 2/4 (52.4%) of the respondents have established cooperatives in their schools/dormitories, while slightly less than 2/4 (47.6%) do not. According to Vidović (2020), they represent a model of practical learning and development of entrepreneurial skills and democratic competencies through production, teamwork, and business management, based on the values of cooperation, solidarity, and care for the community and the environment. They are organized as *quasi-cooperatives*, meaning they imitate real cooperatives but are not separate legal entities (Vidović, 2020).

The results of statistical analyses indicate that, among the respondents, the most represented activities in the *Annual Plan and Program of the school library's work for 2021/2022*, in the context of cultural and public activities, were related to environmental protection for the purpose of schoolchildren learning and teaching: encouraging the love of reading e-books (26.9%), workshops on recycling materials (25.2%), teaching about energy-efficient behaviour and conservation (21.0%), creating posters (16.9%), documentary films (16.2%), green photo exhibitions (14.8%), gardening (12.8%), forest protection, navigation, and behaviour in the forest (12.8%), eco fairs (10.0%), workshops on food cultivation, distribution, and consumption (9.7%), activities related to the negative impact of cities on the environment with a special focus on air quality (9.3%), student plays on environmental education (9.0%), lectures on buying environmentally friendly products, e.g., clothes made from recycled and organic materials (7.9%),

collaboration with schools conducting similar activities (6.9%), discussion groups (6.6%), the use of technology in service of a green school (5.9%), observing and photographing global warming (5.9%), workshops on energy conversions, energy conservation laws, and energy production (5.2%), lectures on proper food shopping (4.8%). Less represented activities, received under the category of "other," included public speaking about climate change, environmental clean-up actions, writing blogs about green libraries and sustainable development, collecting plastic bottles, workshops related to Earth Day, environmental preservation and care, planting new trees in the school garden, recitations about the environment, creating appropriate displays, and creating Eco etiquette. These mentioned activities align with the fundamental green competencies intended for schoolchildren within the GreenComp European Competence Framework (Bianchi, et al., 2022).

From all the mentioned activities that library professionals engage in, we highlight the activity of cultivating school gardens as a representative example of sustainable practices across all sustainability aspects (environmental, social, cultural, and economic). Cultivating school gardens (fruits, vegetables, flowers, medicinal herbs) with schoolchildren on the school premises has a multidimensional positive impact on them and the school staff. The school/dormitory garden serves as an educational laboratory for sustainable development, where all school staff can be researchers. Schoolchildren can explore, plan, collaborate, make individual and group decisions, take responsibility, and socialize. The first dimension of the school garden is educational, the second is health-related, the third is social, the fourth is psychological, the fifth is environmental, the sixth is related to food, the seventh is economic, and the eighth is cultural.

The school garden provides an excellent foundation for establishing schoolchildren cooperatives, conducting extracurricular activities, and providing quality meals in school. Since most urban schools lack suitable space for larger school gardens, these activities are often limited to small potted plants in school hallways. It would be beneficial if all school roofs were transformed into green roofs with school gardens, where environmentally friendly products could be grown. Smaller school/dormitory project proposals related to sustainable development can be submitted to the Ministry of Science and Education of the Republic of Croatia as part of funding applications at the beginning of each school

year, in the context of extracurricular activities, preventive projects, and projects for gifted schoolchildren. Larger or major project proposals for converting school roofs into green roofs can be submitted to open calls by the funds of the European Union or other funds of countries participating in the European Economic Area (EFTA).

The results (Table 5) of statistical analyses show that a large portion of library professionals engaged in one of the mentioned media activities related to content for learning and teaching within the context of cultural and public activities from 2016/2017, while 65 (22.4%) did not.

Table 5

Engagement in one of the mentioned media activities related to content for learning and teaching within the context of cultural and public activities from 2016/2017

		Frequency	Percentage	Valid percentage	Cumulative percentage
Value	Yes.	225	77.6	77.6	77.6
	No.	65	22.4	22.4	100.0
	Total	290	100.0	100.0	

In the *Annual Plan and Program of the school library's work* from the school year 2016/2017 to 2020/2021, in the context of cultural and public activities, the most represented environmental protection activities for schoolchildren learning and teaching were as follows: posters (41.0%), workshops on recycling materials (30.3%), encouraging the love of reading e-books (22.1%), energy-efficient behaviour and conservation (21.0%), documentary films (16.6%), green photo exhibitions (15.9%), forest protection, navigation, and behaviour in the forest (15.9%), cultivating gardens with schoolchildren in the school courtyard (13.4%), eco fairs (10.0%), lectures on buying environmentally friendly products, e.g., clothes made from recycled and organic materials (9.0%), schoolchildren plays on environmental education (7.6%), discussion groups (7.2%), workshops on food cultivation, distribution, and consumption (6.9%), activities related to the negative impact of cities on the environment with a special focus on air quality (6.9%), the use of technology in service of a green school (6.6%), workshops on

energy conversions, energy conservation laws, and energy production (6.2%), collaboration with schools conducting similar activities (6.2%), lectures on proper food shopping (5.5%), writing blogs about green libraries and sustainable development (3.1%), observing and photographing global warming (3.1%). Other activities included the preservation of the school environment, ecological actions, planting mini-gardens, creating bee hotels and sowing annual plants for bee pastures, and storytelling with environmental themes.

When comparing the activities in the *Annual Plan and Program of the school library's work* from the school year 2016/2017 to 2020/2021 with the plan for the school year 2021/2022, technological advancements and differences in preferences can be observed. Five years ago, the main sustainable activity was creating posters, while in 2021/2022, it shifted towards encouraging the love for e-books.

More than $\frac{1}{4}$ (32.4%) of the respondents have suitable space in their school/dormitory for conducting environmentally friendly business activities. Less than $\frac{3}{4}$ (64.8%) of the respondents do not have such space. There were 1.7% of them who said that the school library serves as such a space. There were 0.3% of respondents who use the space of a volunteer club. There were 0.3% of respondents who stated that they have and do not have suitable space (depending on activities), and 0.3% of respondents said that they are in the process of preparing for the construction of a green classroom. Furthermore, 193 (66.6%) of the respondents stated that COVID-19 prevented the implementation of all green activities in the school year 2021/2022, while 97 (33.4%) stated that it did not prevent them.

Table 6 shows that $\frac{3}{4}$ of the respondents indicated that they conduct media activities related to environmental protection for learning and teaching within the context of cultural and public activities as planned in *the Annual Plan and Program of the school library's work* for 2021/2022, while $\frac{1}{4}$ of them do not conduct such activities.

Table 6

Media activities related to environmental protection for learning and teaching within the context of cultural and public activities in the Annual Plan and Program of the school library's work for 2021/2022

		Frequency	Percentage	Valid percentage	Cumulative percentage
Value	Yes.	222	76.6	76.6	76.6
	No.	68	23.4	23.4	100.0
	Total	290	100.0	100.0	

Library professionals, for the purpose of promoting their work, most commonly use the school's or library's *Facebook* page, as well as the school's website, which is also a form of sustainable business practice. In recent times, some school libraries also have an *Instagram* or *TikTok* profile. These are viable social channels for promoting media activities in school libraries. It would be beneficial if library professionals promoted themselves more on portals, blogs, wikis, newspapers, and television through various pedagogical approaches to sustainable business.

Out of 290 respondents, 121 (41.7%) stated that they promote and advocate for green ideas and library and school activities in the wider community, while 169 (58.3%) do not promote or advocate for them. Peattie (1995) states that the boundary between defining sustainable and green marketing is not always clear, even though they are two different concepts. According to Peattie (1995), the concept of green marketing is sometimes broadly defined as a holistic management process that is responsible for identifying, anticipating, and satisfying the needs of customers and society in a profitable and sustainable manner. Therefore, green marketing is a means of raising citizens' awareness of their decisions and behaviour patterns in relation to sustainability aspects (environmental, social, cultural, and economic). Through product promotion, project implementation, programs, activities, and workshops in private profit-driven companies and non-profit institutions (schools, dormitories), it influences the awareness of the general public. Any promotion and advocacy of school libraries in the context of sustainable development ideas and practices is referred to as green promotional activities, which are part of the overarching concept of green marketing. In the context of a school as an independent institution that

produces and offers something through project activities, we can talk about green marketing. Derlukiewicz *et al.* (2020) emphasize that sustainable development recommends that the needs of the future can be met depending on how well social (justice, participation, empowerment, social mobility, and cultural preservation), economic (services, household needs, industrial growth, agricultural growth, and efficient labour utilization), and ecological (biodiversity, natural resources, carrying capacity, ecosystem integrity, and clean air and water) objectives or needs are balanced.

Furthermore, 242 (83.4%) of the respondents stated that they have the support of the school principal in implementing sustainable business activities, while 48 (16.6%) of them do not. This statement was made during the COVID-19 pandemic. It is assumed that the reason for this lack of support is insufficient financial resources and online teaching.

Conclusion

This is a recent topic in the field of school libraries. The hypothesis has been confirmed through activities and workshops, but not through projects. Out of 290 respondents who completed the questionnaire, 215 (74.1%) library professionals stated that during the 2021/2022 school year, they did not lead any project(s) related to sustainable development on the school, national, or international level, and that the school library was not involved in any existing projects or programs for green libraries or projects related to sustainable development. Some school libraries are involved in several projects and programs simultaneously on the school, national, and international level through eTwinning and Erasmus+ projects. Some librarians also collaborate on projects funded by the European Union.

The majority of library professionals collaborate with lower-primary school teachers and with teachers of various subjects, including nature, biology, geography, and physics, as well as secondary school teachers of biology, ecology, geography, and physics, and educators in promoting literacy about sustainable development. Less than 1/4 of librarians lead some extracurricular activity related to sustainable practices, while 3/4 do not. 1/4 of the respondents reported working in schoolchildren's cooperatives, while just under 3/4 do not. More than

3/4 of librarians conduct media activities on environmental protection for the purpose of learning and teaching in the context of cultural and public activities.

In the *Annual Plan and Program of the school library for the 2021/2022* school year, the five most represented activities related to environmental protection for the purpose of student learning and teaching on the national level are: encouraging a love for reading e-books, workshops on material recycling, teaching schoolchildren about energy-efficient behaviour and saving, creating posters, and making documentary films. In the *Annual Plan and Program of the school library* from 2016/2017 to 2020/2021, the most represented activities related to environmental protection for the purpose of learning and teaching on the national level were: posters, workshops on material recycling, encouraging a love for reading e-books, energy-efficient behaviour and saving, and documentary films.

The results show that more than 1/4 of the respondents have suitable space in the school for conducting environmentally sustainable business activities, while less than 3/4 do not. More than 3/4 of the respondents stated that they have support from the principal in conducting environmentally sustainable business activities, while the rest do not. The data show that there is interest (self-initiated or in collaboration with colleagues) among library professionals to acquire new sustainable competencies through working on projects, conducting activities, and workshops. Printed materials related to environmental protection and preservation are more represented in the library collection compared to electronic and digital resources. Undoubtedly, financial resources, suitable space, and professional development are necessary for all aspects of sustainability in the school/dormitory, along with the willingness of librarians and other staff. By combining all of these elements, we can talk about true sustainability. By implementing various types of activities, the school library and the school become a laboratory for literacy in life skills for both schoolchildren and teachers. Possessing personal competencies along with collaboration with others leads to sustainable success.

PEDAGOŠKI PRISTUPI ODRŽIVOM RAZVOJU U ŠKOLSKIM BIBLIOTEKAMA

APSTRAKT

Cilj je rada analizirati neke od aspekata održivog razvoja u hrvatskim školskim bibliotekama unutar tri delatne grupe (neposredna vaspitno-obrazovna delatnost, stručna bibliotekarska delatnost, te kulturna i javna delatnost) u svrhu unapređenja saznanja o školskom bibliotekarstvu. Novi izazovi koje je donela digitalna zrelost školskih ustanova (osnovne i srednje škole, učenički domovi) te novi Globalni ciljevi održivog razvoja 2030. uticali su na promenu poslovanja rada školskog bibliotekara, a ono se temelji na uključenosti, vizuelnom identitetu i održivosti škola/učeničkih domova unutar i van postojećih okvira delovanja. Na pozitivne i negativne efekte poslovanja školskih biblioteka uticala je i pandemija Covid-19. Istraživanje je kvantitativno, metoda je online anketni upitnik, a podaci su statistički obrađeni u Statističkom paketu za društvene nauke - SPSS. Dobijenim rezultatima uočava se da veliki deo stručnih saradnika - bibliotekara nije osnažen za nove profesionalne veštine održivog razvoja, da saraduju sa kolegama iz škole po pitanju sprovođenja aktivnosti o održivom razvoju, da štampana građa o ekološki prihvatljivom poslovanju i održivom razvoju prednjači u odnosu na elektronsku i digitalnu, da manji dio bibliotekara radi na projektima i dr.

Ključne reči: školska biblioteka, održivi razvoj, kompetencije

References

- Asiaei, K., Bontis, N., Alizadeh, R. & Yaghoubi, M. (2021). Green intellectual capital and environmental management accounting: Natural resource orchestration in favour of environmental performance. *Business Strategy and the Environment*, 1–18. <https://doi.org/10.1002/bse.2875>
- Begičević Ređep, N., Balaban, I., Klačmer Čalopa, M. i Žugec, B. (2018). *Okvir za digitalnu zrelost osnovnih i srednjih škola u Republici Hrvatskoj s pripadajućim instrumentom* [The Framework for Digital Maturity of Primary and Secondary Schools in the Republic of Croatia with the Associated Instrument]. Hrvatska akademska i istraživačka mreža – CARNET.
- Bianchi, G., Pisiotis, U., Cabrera, M. (2022). *GreenComp The European Sustainability Competence Framework*. Publication office of the European Union.

- Beutelspacher, L. & Meschede, C. (2020). Libraries as promoters of environmental sustainability: Collections, tools and events. *International Federation of Library Associations and Institutions*, 46(4), 347–35.
<https://doi.org/10.1177/0340035220912513>
- Derlukiewicz, N., Mempel-Śnieżyk, A., Mankowska, D., Dyjakon, A., Stanislaw, M. & Pilawka, T. (2020). How do Clusters Foster Sustainable Development? An Analysis of EU Policies, *Sustainability*, 12(4), 1297.
<https://doi.org/10.3390/su12041297>
- Croatian Bureau of Statistic. (2022, 15 Novembar). *Primary school, end of school year 2020/2021 and the beginning of the 2021/2022 school year*
<https://podaci.dzs.hr/2022/hr/29006>
- EBLIDA. (2020, 15 Novembar). Sustainable Development Goals and Libraries: First European Report. <http://www.eblida.org/Documents/EBLIDA-Report-SDGs-and-their-implementation-in-European-libraries.pdf>
- European Union. (2022, 15 Novembar). *Funding, grants and subsidies from the European Union*. https://european-union.europa.eu/live-work-study/funding-grants-subsidies_hr
- Horvat, A. (2007). Važnost profesionalne etike [The Importance of Professional Ethics]. In I. Marinković-Zenić (Eds.), *Profesionalna etika knjižničara i društvene etičke norme: 6. okrugli stol o slobodnom pristupu informacijama* (pp. 5-10). Hrvatsko knjižničarsko društvo.
- International Federation of Library Associations and Institutions (IFLA). (2002, 20 Novembar). *Statement on Libraries and Sustainable Development*. <https://www.ifla.org/publications/statement-on-libraries-and-sustainable-development>
- IFLA/UNESCO. (1999). *School Library Manifesto*. <https://www.ifla.org/wp-content/uploads/2019/05/assets/school-libraries-resource-centers/publications/school-library-manifesto-hr.pdf>
- Kraljević, I. & Afrić Rakitovac, K. (2021). Promicanje ekološke osviještenosti projektom „Zelena knjižnica“ Društva bibliotekara Istre« [Promoting Environmental Awareness with the Project “Green Library” of the Association of Librarians of Istria”]. *Vjesnik bibliotekara Hrvatske*, 64(2), 399–423.
- Lukačić, P. (2018). ENSULIB - Međunarodna grupa unutar IFLA-e koja se bavi održivim razvojem i knjižnicama [International group within IFLA that

addresses the issues of sustainable development and libraries]. *Svezak: časopis Društva knjižničara Bilogore, Podravine i Kalničkog prigorja*, 20, 11-13.

Ministry of Science and Education of the Republic of Croatia (2022, 10 Decembar). Secondary schools. [Ministarstvo znanosti i obrazovanja Republike Hrvatske. Srednje škole.]

<http://mzos.hr/dbApp/pregled.aspx?appName=SS>

Ministry of Science and Education of the Republic of Croatia (2021). Models and recommendations for working in conditions related to the COVID-19 disease. [Ministarstvo znanosti i obrazovanja Republike Hrvatske. (2021). Modeli i preporuke za rad u uvjetima povezanim s bolesti COVID-19.]

[https://mzo.gov.hr/UserDocImages/dokumenti/Modeli%20i%20preporuke%20za%20provedbu%20nastave%20u%202021-2022%20\(1\)_31%208.pdf](https://mzo.gov.hr/UserDocImages/dokumenti/Modeli%20i%20preporuke%20za%20provedbu%20nastave%20u%202021-2022%20(1)_31%208.pdf)

Ministry of Science and Education of the Republic of Croatia (2019). Decision on adoption of the curriculum for the cross-curricular theme Sustainable Development for primary and secondary schools in the Republic of Croatia. *Official Gazette*, 7.

https://narodnenovine.nn.hr/clanci/sluzbeni/2019_01_7_152.html

Peattie, K. (1995). *Environmental Marketing Management: Meeting the Green Challenge*. Pitman.

Sahavirta, H. (2019). Set the Wheels in Motion – Clarifying “green library as a Goal for Action. *IFLA WLIC: Libraries: dialogue for change, Session 166 - Libraries and Sustainability: Examples, Supporters, Educators - IFLA & Environment, Sustainability and Libraries Special Interest Group (ENSULIB)*. Greece. 1-8. <http://library.ifla.org/2568/1/166-sahavirta-en.pdf>.

Slijepčević, S. i Zuković, S. (2022). Kompetencije pedagoga za aktivnosti profesionalnog zagovaranja/zastupanja [Competencies of a Pedagogue for Professional Advocacy]. *Zbornik Odseka za pedagogiju*, 31, 1-14. <https://doi.org/10.19090/zop.2022.31.9-22>

Standard za školske knjižnice. [School library Standard.] (2023, 25 May). *Official Gazette*. 17/19; 98/19.

<https://mzo.gov.hr/UserDocImages/dokumenti/Obrazovanje/OpremanjeSkola/Standard-za-knjiznice/Standard-za-skolske-knjiznice.pdf>

Standard za školske knjižnice. [School library Standard.] (2023, 25 Maj). *Official Gazette*. 34/2000-698. https://narodne-novine.nn.hr/clanci/sluzbeni/2000_03_34_698.html

Sustainable Development Commission. (2023, 5. April). *What is sustainable development*. <https://www.sd-commission.org.uk/pages/what-is-sustainable-development.html>

Tokić-Zec, R., & Mlinarević, V. (2023). Profesionalni identitet i vrijednosti učitelja u kulturi škole [The Professional Identity and Values of Teachers in School Culture]. *Obnovljeni Život: časopis za filozofiju i religijske znanosti*, 78(2), 221-230. <https://doi.org/10.31337/oz.78.2.6>

Úbeda-García, Mercedes; Marco-Lajara, Bartolome; Zaragoza-Sáez, Patrocinio C., Manresa-Marhuenda, E. & Poveda Pareja, E. (2022), Green ambidexterity and environmental performance: The role of green human resources. *Corporate Social Responsibility and Environmental Management*, 29(1), 32–45. <https://doi.org/10.1002/csr.2171>

United Nations (UN). (2015, 18 Septembar). *Transforming our world: the 2030 Agenda for Sustainable Development*. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

Vidović, D. (2020). Učeničke zadruge kao rasadnik zadrugarstva? Refleksije zadržanih načela u Hrvatskoj [Student Cooperatives as Cooperatives' Nurseries? Reflections on Cooperative Principles of Student Cooperatives in Croatia]. *Socijalna Ekologija Zagreb*, 29(3), 389-416. <https://doi.org/10.17234/SocEkol.29.3.3>

