US-China Education Review A 7 (2011) 967-976 Earlier title: US-China Education Review, ISSN 1548-6613



Some Aspects of Sustainable Development in Kindergartens in Slovenia

Jurka Lepicnik Vodopivec University of Maribor, Maribor, Slovenia

Aspects of environmental crisis (industrialization, explosive growth of population and urbanization) have a negative effect on the environment. However, they also impact the mentality of population (for example, urbanization has lead to the decreasing numbers of adults and children having a direct contact with the natural environment). Environmental education and education for sustainable development has developed from the concern of destruction of environment and anthropocentric mentality. Experts are convinced that education based on environmental ethics leads to a quality future. The author analyses the currently valid Curriculum for kindergartens in Slovenia from the aspect of sustainable development. In the second empirical part of the article, the author presents the research that was conducted in order to get the answer to that how the Slovenian kindergartens include sustainable development into daily praxis.

Keywords: environmental education, education for sustainable development, kindergarten curriculum

Introduction

The general democratization of social relations, the transition to market economy and the integration into European institutions have also brought about changes in terms of learning and education. The globalization processes we witness at every step, new scientific discoveries, new technologies and communication forms in an era of intertwined, diverse and variable values have influenced everyone's lives. These phenomena and processes have triggered new education conditions and changed the national and transnational discourse on the ways of human life and work. All of this directly affects the goals, contents, methods, organization and strategies of education at the local, national and international levels.

The realization that natural resources are limited and everything in the environment surrounding us is connected (Vester, 1991) helps develop adequate environmental consciousness and a modern concept of sustainable development or a sustainable future (Uzelac & Pejčić, 2007). The two authors estimated that the challenge of the modern world can be understood in the context of a sustainable community where the needs of the individual and the society are met without posing a threat to the life of future generations. Marentič Požarnik (2000a) held a similar opinion and added that sustainable development requires appropriate education which helps foster lifestyles, production methods and consumption levels which the existing ecosystem can still handle. At the same time, education for sustainable development must also be future-oriented, as such a stance is the only way of ensuring that our descendants will be able to meet their basic needs as well. The priority solution to environmental issues definitely lies in education. Through environmental education, people's views

Jurka Lepicnik Vodopivec, Ph.D., associate professor, Faculty of Education, University of Maribor.

and attitudes towards themselves as well as the environment are changed.

Environmental Education in Kindergarten

Environmental ethics principles must be enforced in all countries of the world, all activities and in the three key fields of everyday life, namely, work, being and other. The essential components of environmental ethics are coexistence among generations and all communities as well as a common, global responsibility for current conditions and for the future. Changes occur in the course of progress. They are based on the development of science, activities and human capabilities. Education for a healthy and safe future is a demanding and lengthy process, which, however, must not be delayed any further. It must encompass the whole life span, a broad range of activities and a variety of areas. Educating youth and adults according to environmental ethics principles and the respect for environmental values enriches the lifestyle of the civilization and individuals. We cannot afford to ignore the integrated nature of life and full freedom cannot be exercised in the struggle for existence and well-being. Environmental and broader civilization ethics introduce a strong demand for protecting the roots of our life into the contemporary world of market production, consumption and firmly anchored, widely promoted consumerism (Barle, 2000).

Slovenia has a rather rich environmental education tradition. In the 1970s and 1980s, a great emphasis was placed on informing the public and professional circles of the necessity to improve the social and individual attitudes towards nature and man's environment. The decreased capability of the environment to tolerate man's pressures indicates that a change in our behavior is urgent. Even though these facts were largely ignored by a broad scope of activities in the environment, it was possible to insist on two bases. The first premise is a critical stance enabling a sensible selection of long-term plans and measures to improve the state of the environment. These may be implemented through knowledge, continuous research and relevant projects. The second basis of development, to a great extent linked to the first, is environmental education of children and adults grounded on holistic environmental philosophy.

The term environmental has already been substituted by some with the terms sustainable education or education for sustainable development. To an environmentally conscious person, the term "sustainable development" implies development which meets present needs without jeopardizing the chance for future generations to meet their own needs. Sustainable education is designed to help us develop a lifestyle, production and consumption manner which the earth's ecosystem can sustain. Future generations and the third of the world still living below the threshold of meeting basic needs must also be kept in mind. Furthermore, sustainable education calls for moderation, solidarity and responsibility, transferred from nature and fellow men to future generations. The term "sustainable development" also carries a strong ethical message. Environmental education for "the new generation" or education for sustainable development no longer places such strong emphasis on teaching about the environment and its characteristics, and it no longer focuses only on protecting the natural environment (Uzelac & Pejčić, 2004). Education for sustainable development takes a step further. Emphasis is placed on discussing environmental problems people face by using limited natural resources. The children are supposed to understand that it is not nature which has problems. People and human communities have problems, since our manners of exploiting limited resources as well as our blind pursuit of economic advancement and profit worsen living conditions and threaten the health of the current and future generations. As numerous authors estimated (Marentič Požarnik, 2000b; Uzelac & Pejčić, 2004), education for sustainable development encompasses not only the past and the present but the future as well.

Education for Sustainable Development in Kindergarten

The developmental strategy of the European Union is based on the idea "our common future" and is grounded on sustainable development. A demand has been put forward to integrate sustainable development in all European practices and policies, so that it becomes a balanced and mutually supporting way of acting and living with the aim of achieving economic, environmental and social objectives. The concept of sustainable development is understood as a reconciliation of different sectorial interests and priorities. As such, it reflects the need to consider the desired quality and the actual speed of social development as well as the need to balance diverse social values. Thus, formulated, sustainable development aims at balancing economic growth and development on the one hand with the interest in protecting the environment and maintaining social development which puts man in the forefront on the other (Torkar, 2006).

According to the experts (Fien, 2006; Drake, 2006) as cited by Anđić (2007), realizing sustainable development is feasible only through learning or human resources. That is ultimately the message of DESD (the decade of education for sustainable development), declared by the United Nations Organization for the period between 2005 and 2015 (retrieved from http://www.cse.mrt.ac.lk). The main goal of the decade is to develop a learning society, whose main values are knowledge, creativity, critical and analytical thinking as well as individuals' abilities to solve problems arising as negative consequences of industrialization and urbanization. Education for sustainable development is a complex and dynamic process covering a broad spectrum of mutually connected and conditioned social, economic and environmental issues, problems and objectives.

Can we speak of education for sustainable development in kindergarten?

It is generally known that a pre-school child learns through experiences, which are spontaneous, concrete and, most of all, individual. In order to learn, the child must have the opportunity to explore, inquire and constantly test what he/she has learned. In education for sustainable development, the direct experience is an irreplaceable element of the child's learning process. Particular emphasis is placed on learning with the help of all senses (not only sight and hearing, but also smell, touch and taste), emotions (developing positive emotions such as admiration and love, and controlling negative ones, such as fear of the future, excessive anxiousness), learning through values (developing care, tactfulness, thriftiness, solidarity, responsibility for fellow men and other living beings), social experience (with adults and children) and a relevant (environmental) activity in the kindergarten and/or its surroundings. The child should be perceived as an active and autonomous member of society with certain competences and his/her own culture of relationships, practices and meanings. Consequently, new and different learning and educational contents, strategies and approaches need to be developed. Education for sustainable development is an area where there is no room for classic frontal and factographic pedagogical approaches. It is thus necessary to consider how to bring education for sustainable development closer to a child, whom we, based on the new childhood paradigm, understand as a competent and autonomous agent, or put differently: Education for sustainable development must be designed so as to allow room for the child's autonomy, competence, activity and creativity. We must prevent education for sustainable development from becoming another obligatory educational content, passed on in a frontal and factographic manner. The answer to the above-posed question is affirmative, even though, as we have already said, education for sustainable development is implicitly embedded into the curriculum for kindergartens.

Analysis of the Curriculum for Kindergartens (1999) Through the Prism of Environmental Education and Education for Sustainable Development

On the basis of analyzing the global goals of the curriculum (Curriculum for kindergartens,1999), such as: encouraging children to investigate and explain phenomena in the environment from different perspectives, developing consciousness of the co-dependence of natural and social phenomena, paying special attention to the negative effects of human activity on the environment as well as the problems which arise from these effects and the conflicts which occur when attempting to solve them, giving children the opportunity to acquire the knowledge, understanding, values, opinions, diligence and skills necessary for protecting and improving the environment, we estimate that the Curriculum for kindergartens includes both elements of environmental education as well as education for sustainable development. It, thus, comprises mutually intertwined goals derived from the cognitive, emotional and actional areas as well as values, which also requires special didactic approaches and emphases (Marentič Požarnik, 2000a).

Furthermore, an analysis of the basic principles of environmental education reflected in the interdisciplinary environmental education curriculum (Marjanovič Umek, 2001) outlined the following major principles: acquiring basic knowledge of the environment, using modern methods and techniques based on demonstrating environmental education with practical cases and encouraging new approaches which improve the children's motivation when solving environmental problems. The methods of engaging children into the process as well as training for environmental education must break away from passive acceptance of knowledge based on the old rule "from the head through the heart into hands" by using various applications, actively working with the pupils and cooperating with all participants in the education process in kindergarten. All of the above leads to the conclusion that environmental education is strongly embedded into the goals and principles of the current curriculum for kindergartens.

The Curriculum for kindergartens (1999) stated six separated yet closely intertwined areas.

Area of Physical Activity

Moving and playing are two of the child's primary needs. The perception of the environment, space, time and oneself is dependent on physical activity (Curriculum for kindergartens, 1999, p. 25). The goal of "understanding the role of nature and a clean environment in relation to physical activity in nature" is the most obvious one, even though other goals of this field offer unlimited opportunities for implementing environmental education. The curriculum enables the implementation of motor activities in the woods, the fields and meadows. Through appropriate organization of the above-stated activities, the child has the chance to observe and compare his/her environment.

Area of Language

In the pre-school period, language activities include communicating with children and adults, getting acquainted with written language and coming to know national and international literature. Children learn to express their emotions, thoughts, experiences and aim to understand messages from others. Environmental education can be introduced through a story about environmental problems. Through discussing and understanding what they have heard children develop sensibility towards the environment. Through concrete activities, the child independently narrates, solves problems, gets acquainted with different media as information sources and develops his/her imagination, pre-reading and pre-writing capabilities. Through acquiring information from the environment children build mental structures which help them understand the

environment and environmental problems and form the basis for developing environmental consciousness (Curriculum for kindergartens, 1999, p. 25). They may participate in different activities, such as producing paper, dealing with waste, etc. and thus recognize the significance of these activities for man's everyday life, learn about man's dependence on the environment and the connection between the two and also discover how man can actively help maintain the balance between nature and society.

Area of Art

The area of art aims at encouraging children to experience and express joy towards beauty. It nurtures and encourages the development of reactions to the internal and external world. Furthermore, it promotes creativity in preparing, organizing and using means and space as well as develops imagination and communication. Children express their experiences through drawings, paintings, dancing and design. They create with waste and natural materials and thus become aware of the meaning of reusing waste.

Area of Society

The inter-disciplinary environmental education is embedded into the area of society. Within the scope of this area, the child learns that people help each other and cooperate in society, learn about diversity and at the same time, explore the opportunities for critical reflection. The child gets to know the characteristics of the local environment and later the broader environment.

Area of Nature

The child discovers living and non-living nature, gets to know and compares living beings and their environment and learns to perceive him-/her- self as one of them. He/she gets to know what he/she and other living beings need in order to survive and remain healthy. The child learns that living beings receive from and give to the environment and the life of living beings depends on other beings and non-living nature. The child acquires experiences on how he/she and other people affect nature and discovers the characteristics of water as well as air. Children get to know various biotopes and life within them. The problems of destroying habitats and consequently animal species are pointed out to them.

Area of Mathematics

The area of mathematics also offers opportunities for implementing environmental education, as the child needs symbols which he/she uses to write down events and describe conditions. The child gets to know graphic illustrations, designs them and reads them. The child learns about the relationship between cause and effect, gets acquainted with the probability of events, and he/she seeks, senses and uses different ways to solve a problem, verifies the meaningfulness of the acquired solution, classifies and sorts.

Based on the above-stated, we estimated that environmental education is dealt with as an inter-disciplinary area while education for sustainable development is not explicitly defined, even though we believe that it is implicitly embedded into all areas of the Curriculum for kindergartens (1999).

By analyzing the activity areas in the Curriculum for kindergartens (1999), we have concluded that each area contains individual elements which support our belief that the Curriculum for kindergartens enables lifelong learning, environmental education and education for sustainable development. These elements are evident, even though neither lifelong education nor education for sustainable development is explicitly expressed, while environmental education is considered as an inter-disciplinary area. The fact is that lifelong learning and education for sustainable development are not specifically emphasized in the Curriculum for

kindergartens (1999). However, a more detailed analysis of the goals and principles in the Curriculum for kindergartens for individual areas (physical activity, language, art, society, nature and mathematics) indicates that the Curriculum for kindergartens does take into consideration the paradigm of lifelong learning and sustainable development. While these findings are indeed worthy of praise, the following question arises: Do those who are responsible for implementing the Curriculum for kindergartens (educators, assistant educators, etc.) indeed plan and implement life and work in the kindergarten in such a manner that both paradigms are realized? Or do educators unintentionally overlook lifelong learning and sustainable development among the numerous goals and principles in the Curriculum for kindergartens (including the objectives of lifelong learning, environmental education and education for sustainable development) and do not incorporate them into planning and executing the everyday work and life of the children and adults in the kindergarten? Consequently, education for sustainable development often remains a rather disregarded and overlooked area, left to the educator's sensitivity towards the environment and his/her judgment on the importance of including these topics into the work with children. The following sections will address this central question in greater detail.

Research and Methodology

Aside from the analysis of the Curriculum for kindergartens (1999) through the prism of environmental education and education for sustainable development, one of the tasks of our research was also to analyze current practices in kindergartens regarding the realization of environmental education and education for sustainable development.

The main goal of our research was to answer the question whether Slovenian kindergartens include education for sustainable development into their everyday practice and how they do so. We posed the following research questions:

- (1) What significance do educators attribute to environmental education in kindergarten?
- (2) Who, in the educators' opinion, plays the most important role in shaping the child's attitude towards the environment?
 - (3) Do children get acquainted with environmental problems of their hometown and, if so, how?

The study was based on the descriptive method of non-experimental empirical pedagogical research.

Ninety-six educators of pre-school children participated in the research. Data were collected by means of a questionnaire composed of two parts: the first three questions refer to the understanding of environmental education, while the remaining 16 refer to applications of environmental education in kindergarten. Most questions are closed-ended. In certain questions, however, the educators had the opportunity to describe the activities performed in the kindergarten as well.

The data provided by closed-ended questions are shown in tables, where absolute (f) and percentage (f%) frequencies are given. For testing dependent relationships between variables, we made use of the χ^2 -test. Data collected with open type questions were signed and categorized, the categories were then ranked based on the frequency of their appearance (f) and the categorized data are shown in tables.

Results Regarding the Implementation of Education for Sustainable Development in Everyday Practice in Slovenian Kindergartens and the Interpretation of Findings

The questionnaire was answered by 96 educators, 28 (41.2%) of whom work in rural kindergartens, while 68 (58.8%) work in urban ones.

Table 1
Number (f) and Structural Percentages (f%) of Educators According to the Evaluated Significance (1—Lowest, 5—Highest) of Environmental Education in Kindergarten

Evaluation	f	f%	
1	0	0	
2	0	0	
3	6	6.2	
4	31	32.3	
5	59	61.5	
Total	96	100	

Evaluation of the Significance of Environmental Education in Kindergarten

It is evident from Table 1 that educators attribute a high significance to environmental education, as more than half of the respondents (59% or 61.5%) chose the highest mark. Many (32.3%) assigned environmental education the mark 4, while the mark 3 was only given by 6.2% of the respondents. Nobody circled the marks 1 or 2. The results show that educators in kindergartens throughout Slovenia are aware of the significance of environmental education which would give children the opportunity to get acquainted with our environment and prepare for treating it responsibly as early as in kindergarten.

The χ^2 -test ($\chi^2 = 1.744$, g = 2, P = 0.418) shows that there are no statistically significant differences in the educators' evaluation of the significance of environmental education in kindergarten according to the location of the kindergarten, which confirms our expectations. Nevertheless, there is a trend of educators in rural kindergartens attributing a slightly higher significance to environmental education (The average mark is 4.50). Since the difference in the average mark is small, we gathered that most educators are familiar with this field.

Understanding of Environmental Education

We were interested in how the educators in kindergartens understand environmental education.

Table 2
Rank Order of the Categories of Understanding Environmental Education (1—Lowest, 5—Highest Mark) in Kindergarten

Rank	Category	f	f%	
1	Environmental protection	29	30.2	
2	Getting acquainted with the environment	22	22.9	
3	Quality of life today and in the future	20	20.8	
4	Solving environmental problems	15	15.6	
5	Attitude towards the environment	10	10.4	

Table 2 shows that the lowest evaluated category was environmental protection, and it was chosen by a good third of the respondents (29 or 30.2%). According to the respondents, the second rank in environmental education is getting acquainted with the environment, which was chosen by 22 respondents or 22.9%. Twenty (20.8%) respondents ranked the quality of life today and in the future in the third position. The most significant categories of environmental education, according to the educators, are solving environmental problems, which were chosen by 15 educators or 15.6%, and attitude towards the environment, chosen by 10 respondents or 10.4%. Since we found that attitude towards the environment is an important element of environmental education in kindergarten, we were interested as to which factors in the educators' opinion affect the shaping of

the child's attitude towards the environment.

Factors Which Influence the Shaping of the Child's Attitude Towards the Environment

Table 3

Number of Educators According to Significance Ranks of Factors Influencing the Shaping of A Child's Attitude Towards the Environment (1—Affects the Most, 3—Affects the Least) and the Calculated Average Rank \bar{R}

Factor influence									
Rank	Peers	Family	Educators in the kindergarten	School	Media	Activities outside the kindergarten			
1	3	88	4	2	0	2			
2	6	6	80	0	3	3			
3	23	2	10	29	21	11			
Average rai	nk R 2.6	1.1	2.06	2.871	2.875	2.56			

As seen in Table 3, the average evaluation 1.1 shows that the family is the most important factor affecting the child's receptiveness of the environment. Family is followed by educators in the kindergarten ($\bar{R}=2.06$). The remaining factors are closer together according to the average rank. Activities outside the kindergarten ($\bar{R}=2.56$) are followed by peers ($\bar{R}=2.6$) and finally by school ($\bar{R}=2.871$) and media ($\bar{R}=2.875$) with an almost equal average evaluation.

The educators estimated that the most important factor influencing the child is the family, which we agree with. The family is the one getting the child acquainted with the environment from his/her birth onwards and also spontaneously transferring its attitude towards the environment. Furthermore, the family should provide the child with the feeling of safety and trust, while its members act as role models. The children also meet their kindergarten educators early in life and therefore they exert significant influence on them. It is interesting that no such obvious dividing lines appear with other factors (school, activities, peers and media), and in the educators' opinions, the latter affect the children to a similar extent. This can be ascribed to the fact that children do not spend as much time on engaging in other activities. In addition, their role models are the educators rather than peers. Finally, school and the media appear in a child's life later than other factors. In neither case, the differences according to the location of the kindergarten proved statistically significant when evaluating different factors which influence the shaping of the child's attitude towards the environment (peers $\chi^2 = 1.066$, g = 2, P = 0.587; family $\chi^2 = 2.108$, g = 2, P = 0.348; educators in the kindergarten $\chi^2 = 1.241$, g = 2, P = 0.538; school $\chi^2 = 0.744$, g = 2, P = 0.389; media $\chi^2 = 1.504$, g = 2, P = 0.471; activities outside the kindergarten $\chi^2 = 1.678$, g = 2, P = 0.432).

Solving Environmental Problems

Results showed that in the current or previous school year, 41.7% educators planned and implemented an activity related to solving environmental problems in the local environment. Most educators (58.3%) did not plan or implement such an activity. A statistically significant difference according to the location of the kindergarten may be noted in the implementation of activities related to environmental problems ($\chi^2 = 36.879$, g = 1, P = 0.000). A large portion (89.3%) of rural kindergartens implemented such an activity, while the percentage in urban kindergartens is significantly lower (22.1%). The greater engagement of activities related to the problems of the hometown in rural kindergartens may be attributed to a greater inclusion of these kindergartens into the environment itself, and therefore, the educators' increased sensibility to local environmental issues.

Conclusions

Based on our theoretical and empirical findings on lifelong learning, environmental education and education for sustainable development in kindergarten, the following points should be emphasized:

- (1) Understanding kindergarten as a place where children and adults live, play and learn, perceiving it as an open place focused on meeting the needs of the children, parents and the environment, as well as a place where the spatial, temporal and pedagogical organization is reflected in the learning process and the child's development, which is a prerequisite for sustainable development;
- (2) An open, goal- and process- oriented curriculum, based on the integrated understanding of the educational factors as interlaced elements of both the visible and the hidden curriculum;
- (3) The above curriculum calls for a transactional (preparation of the children for independent problem solving) and transformational (a comprehensive development of the child's potentials ranging from the physical and cognitive to the social-emotional aspect, which leads to harmony between the individual and society as well as between man and the environment) understanding of learning. In such conditions, the educator's role is no longer transmission (delivering knowledge) but rather a complex development of sensibility to the environment and thus the formation of environmental consciousness. Such a shift cannot occur overnight. Instead, it takes place gradually.

In this context, we understood the environmental paradigm as the lifelong learning model, regardless of whether it takes place in the family, kindergarten or at school; as Torkar (2006) reflected, the environmental paradigm is a philosophy of education and life whose pedagogical-environmental practical purpose is an active cooperation among the family, parents, the kindergarten, educators and children in addressing problems related to the environment, in the environment, for the environment and about the environment.

Finally, it should be added that pre-school children must learn how to learn throughout their life, as environmental problems are unpredictable. These children will approach these problems in the future as adults and they will do so independently through learning completely new skills. The consequence of such learning will be empathetic knowledge (Rifkin, 2009) which bonds, preserves relationships, emphasizes quality, strives to maintain and increase diversity, respects the legality of life and is responsible towards the future, participative, synergistic and nonaggressive. This, indeed, is what constitutes lifelong learning and education for sustainable development.

References

Anđić, D. (2007). Teachers, school, family and local community within the context of education for environment and sustainable development. In V. Kadun (Ed.), *Deontology of teachers*. Pula: University Juraj Dobrila of Pula.

Barle, A. (2000). *Programes and strategies of environmental education*. Ljubljana: The Council for Environmental Protection of the Republic of Slovenia.

Bredekamp, S. (Ed.). (1996). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, D. C.: National Association for the Education of Young Children (NAEYC).

Curriculum for kindergartens. (1999). Ministry of Education and Sport.

DESD (Decade of Education for Sustainable Development). Retrieved March 1, 2009, from http://www.cse.mrt.ac.lk

Drake, C. (2006). Living our values in education: Principle and practice. *The 10th UNESCO-APEID International Conference on Education "Learning Together for Tomorrow: Education for Sustainable Development"*. Bangkok, Thailand. Retrieved from http://unescobkk.org/index.pho?id=3811

- Fein, J. (2006). Education for sustainable development: A perspective for schools. In R. R. Singh (Ed.), *The 10th APEID International Conference on Education "Learning Together for Tomorrow: Education for Sustainable Development"*. Bangkok, Thailand. Retrieved from http://unescobkk.org/index.pho?id=3811
- Hohmann, M., & Weikart, P. D. (1995). Educating young children. Michigan: High/Scope Press.
- Marentič Požarnik, B. (2000a). Environmental education for a sustainable future. Environmental Education in Schools, 2(1), 4-9.
- Marentič Požarnik, B. (2000b). Psychology of learning and teaching. Ljubljana: Državna založba Slovenije.
- Marjanovič Umek, L. (Ed.). (2001). *Child in kindergarten: Accompanying guide to curriculum for kindergartens.* Maribor: Založba Obzorja.
- Palmer, J. (1998). Environmental education in the 21st century. London and New York: Routledge.
- Rifkin, J. (2009). *The empathic civilization: The race to global consciousness in a world in crisis* (p. 675). New York: Jeremy P. Tarcher/Penguin.
- Torkar, G. (2006). The influences of teacher's values on his/her educational work in nature conservation (Doctoral dissertation, University of Ljubljana).
- Uzelac, V., & Pejčić, A. (2004). From ecological (un)literacy to life-long learning for sustainable development (with the special concern on teacher's education). In Golac (Ed.), *Ecology in educatiom*. Gospić: University of Rijeka.
- Uzelac, V., & Pejčić, A. (2007). Responsability and competence of teachers in promoting education for sustainable future. In Babić (Ed.), *Competences and teachers competence*. Osijek: Josip Juraj Strossmayer University of Osijek, Faculty of Education. Osijek, Croatia and Kherson State University Kherson, Ukraine.
- Vester, F. (1991). Crysis of overpopulated areas: Development of environmental thinking. Ljubljana: DZS.