SOCIOPEDAGOGICAL ASPECTS OF ENVIRONMENTAL EDUCATION OF PREADOLESCENTS AND ADOLESCENTS AS A FUNCTION OF SUSTAINABLE DEVELOPMENT

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Abstract. This paper deals with the topic of sociological and pedagogical aspects of young people's education in the pre-adolescent and adolescent age in the function of sustainable development. The aim of our research is, from sociological and pedagogical aspect, to: Define the categories of ecologically sustainable education; Observe and categorize the forms of ecological education present in our contemporary practice; Analyze the contents of ecological education aiming to realize sustainable development; Measure the effects of school - as the most spread and most organized form of education – on attitudes of those being educated; Instead of a conclusion to offer hypotheses for modernizing ecological education in the function of sustainable development. In accordance with the abovementioned aims, we will be faced with a number of research methods. During defining the categories, we will combine the descriptive with the method of critical observation, and the usage of fundamental concepts in everyday life. It seems that such a combination is the most adequate one for a thorough understanding of the contents and influence of education on people as ecological beings. Using the contents analysis, we want to point at the school curricula for educating young generations about ecologically sustainable development. Comparisons and combinations will not only help us to clear up the complexity of ecological education, but also to point at a hypothetical possibility of overcoming some stereotypes in our manner of work so far.

Key words: sociopedagogical aspects, ecological education, sustainable development, descriptive method, critical observation.

Introduction

Our modern environmental problems are crucially interwoven with our personal relationship to nature. Individuals who value and feel concern for the natural environment also want to protect it (Frantz et al. 2005; Nisbet, Zelenski, and Murphy 2009). The connectedness between individuals and the natural environment therefore needs reinforcement to counter the current environmental problems. It has been suggested that people must believe that they are a part of nature as this is the only sure path to achieve sustainability through environmentally friendly behaviour (Schultz 2002). Environmental education is a critical tool to counter environmental problems with the goal of protecting and conserving the environment (Potter 2010). An important focus of environmental education is to encourage people to understand, appreciate and implement sustainable practices (IUCN, UNEP, and WWF 1991 in Tilbury 1995). The field of environmental education is dynamic and complex (Palmer 1998) and many definitions have been given. We refer to the Belgrade

charter (UNESCO-UNEP 1976) which states that: 'The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current environmental problems and the prevention of new ones.' For school-based environmental education programmes, Milbrath (1994, p. 278) recommends integrating both the cognitive aspects and affective direct experiences with nature. This integration 'will be a blessing for life' as it helps pupils to bond with nature.

Feeling connected with nature is linked to pro-environmental actions and is a strong motivation for protecting nature, which makes the investigation of connectedness to nature important (Frantz et al. 2005; Kals, Schumacher, and Montada 1999; Kaiser, Roczen, and Bogner 2008). According to Bonnett and Elliott (1999, p. 309), 'At this stage in … history it would be difficult … to identify an issue of greater importance for humankind than its relationship with its environment.' This is reflected by various concepts about human-nature relations. One of the key contemporary connectedness concepts is Kellert and Wilson's biophilia hypothesis (1993), which formed an important interdisciplinary research framework. Research in the field of continuous socio-ecological education was carried out by both foreign researchers: N.M. Ardoin 2021, O. Siegman 2017, C. Galvis-Riaño 2021, E.V. Girusov, E.G. Sharonova, V.S. Shilova, etc.

EE practice in a number of countries is faced with different orientations, outcomes, and the underlying paradigm. Many studies show that there are at least several approaches used, including Education for Sustainable Development (ESD), Education for Sustainability (EfS), and Education for Environmental Sustainability (Efes). In its history, the design of ESD education, which is thick with development narratives, has faced criticism for overemphasizing the quantitative aspect and its dependence on technological progress (Wijesooriya and Brambilla, 2021); and the strong hegemony of the sustainability paradigm through growth (Kopnina, 2020). The implication is that students learn about environmental impacts but do not emphasize understanding the broader impact of the environmental crisis that considers issues of justice (Howard-Jones et al., 2021); and learning experiences with learning reduced to technical or instrumental activities (Kohan, 2018). Likewise, with EfS, which for environmentalists is still often considered to be growing from ESD even though it has removed "development," the word sustainable still has a double term for "sustainable growth" rather than environmental sustainability or the environment being restored (Parker and Prabawa-Sear, 2019). Policymaking can produce and/or inhibit effects following the conception and mobilization of environmental education topics in education policy, where development discourse remains dominant (Mejía-Cáceres et al., 2021).

Biophilia is described as the elemental and innate human need of and predisposition to connect with other living organisms (Kahn 1997). Based on this concept, other ideas have been developed which conceive feelings related to humans' connection with nature as an affective connection or emotional affinity towards nature (Hinds and Sparks 2008, Kals, Schumacher, and Montada 1999, Mayer and McPherson Frantz 2004). This emotional bond between a person and nature covers various positive emotions like intimacy, familiarity, affection and also a feeling of oneness with nature. Another concept focuses on environmental identity as part of a person's self-concept (Clayton 2003). It indicates to what extent someone experiences him- or herself as part of nature and to what extent nature is important for his or her self-perception. Furthermore, the concept of nature relatedness

(Nisbet, Zelenski, and Murphy 2009) and inclusion with nature (Schultz 2002) were developed.

They contain the cognitive, affective and behavioural / experiential aspects of a person's connection to nature. The previously mentioned concepts have one trait in common: they assess the human-nature relationship. The scale reflects the cognitive dimension of connectedness with nature. A person who defines him- or herself as part of nature has a cognitive representation of self that overlaps extensively with his or her cognitive representation of nature. There are few studies regarding the time in life at which a person is most susceptible to consolidating a strong connectedness to nature (e.g., Ernst and Theimer 2011, Wells and Lekies 2006). Therefore, there are still no guidelines in environmental education as to the best age for pupils to develop connectedness to nature. Such a time in life might be the transition from childhood to adolescence. A young person becomes emotionally more autonomous within his or her relationship to caretakers, for example, to the parents (Steinberg and Silverberg 1986). According to Parra and Oliva (2009), this emotional autonomy leads to an increased feeling of individualization, emotional distance and independence from family relationships. The natural environment may itself be seen as a relationship partner (e.g., peer, parent or teacher) to whom an individual can experience greater or lesser commitment (Davis, Green, and Reed 2009). Educational achievement levels might also influence pupils' nature connectedness. Klineberg, McKeever and Rothenbach (1998) found that only the two demographic variables 'age' and 'education' are consistently correlated with environmental concern. Younger and better-educated adults were reported to be more concerned about environmental issues and more committed to environmental protection. Individuals with fewer years of education also showed a lower awareness of environmental problems than those with more years of education (Buttel and Flinn 1978).

Concerning children and adolescents, there is no evidence in the literature as to whether nature connectedness depends on the academic level. It seems reasonable to suggest that the inclusion of nature in self among university-track pupils should differ from that of general-education-track pupils. Therefore, any difference in nature connectedness between pupils of different academic tracks should be investigated with the goal of helping educators design activities that can positively influence connectedness. Wells and Lekies (2006) found that childhood experiences in nature are positively associated with commitment to pro-environmental behaviour and attitudes in later life. They did not find a positive relationship between environmental education during childhood and environmental attitudes or behaviour in the interviewed adults (average age of 45 years). Ewert, Place and Sibthorp (2005) also mention that early-life experiences like formal classroom education and environmental education did not predict environmental beliefs in adults. Many other studies, however, have shown that participation in environmental education programmes commonly has a positive influence on environmental knowledge, attitudes and behaviours (for a review, please refer to Rickinson 2001). As these findings were inconsistent with prior research, Wells and Lekies suspect that more engaging, hands-on environmental education with time to experience nature directly is more likely to have a long-term impact. However, the amount of time essentially needed for a sustainable change in connectedness is still not clear and needs further research (see also Ernst and Theimer 2011). Only a few studies have tested the extent to which environmental education activities promote connectedness with nature. One study showed that seven weeks after a one-day programme, 6th graders' connectedness with nature varied greatly: some pupils experienced increasing

connectedness while in others, it decreased or remained stable (Kossack and Bogner 2011). Ernst and Theimer (2011, 592), using the Children's Connection to Nature Index (Cheng and Monroe 2010) and their own Nature Connectedness Inventory, found that only programmes with 'a condensed time frame of sufficient duration' had a positive effect on connectedness. The examples refer to programmes varying from three to five days of environmental education within a period of at least one week and up to one month. They also found that programmes with young children (3rd and 4th graders) were able to foster connectedness with nature, while programmes with older pupils (5th to 6th and 10th to 12th grade) were not. An emerging concern for environmental educators is to determine which factors are associated with a stronger or weaker connectedness with nature and how educational experiences can foster connectedness (Phenice and Griffore 2003).

2. METHODOLOGICAL APPROACH

By analyzing the content, we want to point out school programs that educate young generations for ecologically sustainable development. Comparisons and combinations will help us shed light on the complexity of environmental education and upbringing, and also indicate the hypothetical possibility of overcoming some stereotypes in the current way of working.

The application of the empirical method is indispensable in measuring the effects of the educational content on the environmental activism of young people, as well as on their further upbringing and education. That is why we measured the effects of primary and secondary school education on secondary school students by surveying students. The empirical method should help us to discover the weak points of the work done so far, discover the factors that block the processual adoption and application of ecological knowledge and, possibly, point out the closest points of the ecological nature of man and an ecologically sustainable community. In addition to the survey, a comparative method has been used. The comparison of the results of the survey is made in relation to the ideal type (curriculum and teaching subjects' programs) and the results obtained in of primary and secondary school. The deductive method - from general to individual - was chosen when defining concepts and moving from existing theoretical goals to practical human activity. The inductive method seemed to be more suitable for empirical research.

The study of literature (presented in a separate section, literature) is limited to institutional programs, records and documents, and general literature that was available to the author. From the point of view of ecological upbringing and education, sustainable development can thus take two different paths, of which, however, the one with the official mark will be applied. But, if it comes to that, in accordance with the theory that upbringing and education are a process, we should not lose hope that eventually good and applicable solutions of this work will have a chance for practical verification.

The sociological aspect of observing environmental upbringing and education stems from the fact that the subject of research is limited to adolescents in a limited area. Thus, the subject of this paper gets its spatial and social function. There is no ecology without biology, and no sustainable development without man as a social being. There is no ecology outside of time and space, but also outside of human practice. Therefore, from the sociological aspect, modern upbringing and education for sustainable development is subject to criticism as positivist and fundamentalist upbringing and education. Instead of producing an ecological being, appreciating the social circumstances in which it develops, it produces partial knowledge and forms a future fundamentalist.

There is no model of upbringing and education that can be applied to all social communities, ages, social structures, and elements and be declared as being sustainable. Although the pedagogical aspect dominates in this paper, the intention was to point out the circumstances that produce such a pedagogical aspect. This is exactly where the difference between the result obtained by the student survey is - that human ignorance is the main factor in environmental crises - and the author's effort to see the complex of factors that produce sustainable and unsustainable development.

2.1. SOCIOLOGICAL ASPECTS OF EDUCATION AND UPBRINGING OF YOUNG PEOPLE UP TO PREADOLESCENT AND ADOLESCENT AGE

In the period of preadolescence and adolescence, personality development is exposed to intensive socialization. Numerous and diverse social subjects are simply invading young people of this age. Never later will the interaction of society and personality be as one-sided as in the period up to the age of 18, regardless of the fact that late adolescence will continue for some time.

Environmental upbringing and education is one of the many areas where an "excursion" will be organized for a young person, after which they should recognize the path themselves and perfect it for the rest of their life. A social generic being should recognize and overcome the harmfulness of existing practices, adopt theoretical knowledge and socially desirable attitudes to maintain ecosystem development. Social forms of organizing people have changed throughout history. The methods of communication between people have been humanized, social conflicts have been recorded, the ages of "darkness" and "light" have alternated, but the goal has remained the same. Why? Man cannot survive outside the ecosystem.

The need for a new science - socioecology or social ecology - is increasingly being felt. Science, which is in its infancy, is burdened by the eclecticism of sociology and biology as developed social and natural sciences. There is no ecology without biology, but there is no ecology without man and his social community. But those arguments are not enough for a person to imitate, and even less to treat nature in a consumerist way. Today socio-ecological activism, tomorrow socio-ecological study, later socio-ecological community. The path leads through the upbringing and education of the young generation.

There is a noticeable need to examine the social factors that influence the development of environmental awareness among adolescents, as well as the mechanisms by which they ensure such social awareness. Also, in cooperation with other sciences, the socioecological science must look for new mechanisms that will ensure greater influence on the realization of those qualities of the socioecological community that guarantee sustainable development. The current educational influence should be critically reexamined, starting with the subjects who create it, through the content offered to young people in the pre-adolescent and adolescent period, to measuring the effects that are realized in the existing way.

In our approach to the problem, we deliberately separate the sociological aspects of environmental education from the pedagogical points of view. From a sociological point of view, it is important to determine the social factors that influence the development of preadolescents and adolescents. The mechanisms by which they exert influence should then be discovered.

2.2. SOCIAL SUBJECTS OF PERSONALITY DEVELOPMENT

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Our starting hypothesis in the research was to rely on theoretical achievements about the factors of society that influence the process of personality formation. From the context of numerous understandings about the factors of society, here we have opted for the following: social environment (understood as a living and working

environment), social institutions (school, church, cultural institutions), family, social organizations (political, non-political, citizens' associations) and friends (understood as generational affiliation, formal or informal groups). As a sample for measuring the effects of the influence of social factors, we took students in Faculty of educational sciences in Stip. What did the results show?

Table 1. Results of a survey of students at the Faculty of Educational Sciences in the 2019/2020 academic year - ranking of factors influencing the formation of students' environmental attitudes

MARKS Factors	10	9	8	7	6	5	4	3	2	1
Family	6	19	15	0	0	0	0	0	0	1
Relatives	0	0	0	0	0	0	0	0	3	38
School	19	15	0	5	0	0	0	1	1	0
Church	1	1	2	0	0	37	0	0	0	0
Middle	12	5	19	3	0	0	0	0	0	2
Comrades	1	0	0	33	6	1	0	0	0	0
Media	1	0	4	0	32	0	4	0	0	0
Self	1	2	1	0	3	0	0	33	1	0
I do not know	0	0	0	0	0	4	37	0	0	0

The following indicators can be observed from the table:
The surveyed students showed that school, family, and social environment play the greatest part in the formation of their environmental attitudes. For 47% of respondents, school is the primary factor, rated the highest. Social environment is in the second place, which as many as 12% of the respondents rated as a ten, while family is in the third place. It is interesting that a very small number of respondents gave a high rating to their generation (2%), although it is widely believed that the generational attitude is the most acceptable for a young person. During conversations, after the publication of the results of the survey, we concluded that adolescents highly value the attitudes of the generation but are aware that they are not the highest quality solutions. This could be concluded from the rating seven (7) that 80.5% of respondents gave to the attitudes of their generation. A score of 10 could be graphically represented as follows:
The respondents gave the least influence to their relatives (they received only one point from 38 respondents or 92.7%), but they were also critical of their own merits - an average rating of 3.8 in the order of numbers from 1 to 10. Even 80.1% gave only three points to their own contribution. The explanation for the stated views could be reduced to the following sub-conclusions: a) Influences of relatives necessarily pass the family filter, so before they are accepted, they are considered family attitudes; b) when evaluating one's own role, it is mainly reduced to the positive projecting of will and merit for acquiring new knowledge and habits, and the role of creativity and independence in decision-making is minimized.

If the next grade (9) is added to the highest grade, we see that in the total, the family is more important than the social environment. Grades 9 and 10 were given to the family by 25 (60.1%) students, and to the social environment by 17 (41.5%). The data indicates that the family ranks as the primary factor in environmental education and that the social environment can be more decisive at one time or in a certain group, but that over time the family emerges from under the social veil. We can argue this with the following example. The overall rating of the influence of the family in 41 pupils is 352 and in the case of the social environment it is 340. What is the reason for this? The values of the social environment necessarily pass through the family, existential filter and, only processed in this way, they become a factor in the development of a young personality. Another question is, how does a young person assess these values? As a family heritage or as broader social values that a person is ready to adopt without question.

A score of 6 was given mainly to the media. It means that they are in fifth place in terms of the degree of influence on the development of the preadolescent and adolescent population. The conversation after the survey shows that high school students owe the media, first of all, for the period that preceded elementary school or manifested itself alongside it. Most of them acquired (positive) attitudes towards biodiversity, even though they were not aware that it was the subject of study of ecology, even before elementary school, by watching cartoons or shows for children.

Over time, the school factor encouraged early knowledge about the environment, only to suppress the other factors in high school. What makes the "school factor" possible is upbringing and education that takes place as a systematic and continuous presence in the life of a young person. It would be inhumane to experiment, which is a limitation of social research, whether the school would have the same effect if it educated in the opposite direction from other factors of personality development.

The small influence of the church in the population of these respondents is explained by the argument that the church in their environment has the status of a historical value (tradition, culture), and not a current value. It was rated five by 37 respondents (90.2%), and higher ratings were given by students who still go to church regularly.

Given that 34% of respondents, students at the Faculty of Educational Sciences in the 2019/2020 school year, in the survey circled the "economic interest" of producers (question 6, see table 19) as the main cause of environmental problems, we wanted to clarify this category. Is it understood as material wealth or material poverty? In a follow-up survey, this question was offered: Economic interest certainly influences the creation of numerous environmental problems. Who does more damage, rich or poor citizens in your midst? Except for two students who circled the answer "equally", the rest accused the rich of being more arrogant towards natural goods. A new question followed: Which category of the population is more educated, violators or admirers of nature? The students gave the following answers: 34 (or 82.9%) offenders and 7 (or 17.1%) circled the answer something else in which there was a different range of attitudes. They can be reduced to these two answers: 1) They are more school educated, but not more moral and, 2) Ecology is not only learned in school, but in everyday life. After such answers, the respondents came to a contradiction with the answers they gave in response to question number 6 in the initial survey, where 39.5% considered the lack of education of people as the main cause of environmental problems.

This is how we return to the dilemma, which Bronowski writes about in "A Sense of the Future", how science (and thus schooling and education, which is based on it) is not the

only ecological thought, nor is it a guarantee of a humanist attitude towards the ecosystem. Science, according to him, implies three aspects: discovery, invention, and creations, and in such a way that, in an attempt to control our environment, it enters it and wants to understand it from the inside.1 Well, this is where the division of social factors that influence personality development is important. Some try to achieve this based on monitoring of the manifestation of ecological problems, and others - science and school - based on entering the foundation of ecological processes.

Sociology of education must pay attention to both types of approaches, as well as to their extreme types that call into question the humanistic way of human existence. As much as it is dangerous to rely on empirical, emergent, fundamentalist upbringing and education is just as dangerous.

Within the framework of the sociological approach to environmental education, we will process the factors that the respondents emphasized as dominant in the formation of their attitudes. School education and education for ecologically sustainable development will be discussed in the second section, under the pedagogical approach.

2.3. SOCIAL ENVIRONMENT AS A FACTOR OF ENVIRONMENTAL EDUCATION AND UPBRINGING

By social environment we will define the social, living and working environment in which the conditions are created for a human being to manifest in. The process of manifestation of a being implies that there are written or unwritten mechanisms, value systems and a way of controlling the individual by society. In this light, the social environment is, on the one hand, a fertile field for the expression of human individuality, and on the other, a determinant of its extension.

The social environment, first of all, implies social interaction of individuals and groups. And, as Max Weber says, every action is not a social action. Only if one's behavior is meaningfully directed towards the behavior of others, it takes the form of a social action.2 The social environment, through written and unwritten mechanisms and value systems, evaluates the character of social action. Like a nightmare, it rises above the individual or smaller social groups.

From barbarism to modern civilizations, the social environment changed its goals, but it basically kept two global methods of controlling social action: despotic and democratic. Lewis H. Morgan finds the roots of democracy in primitive African tribes, in their local tribal governments. On the other hand, despotism has not been overcome even today. But that is not the topic of our discussion.

2.3.1. Attitudes of the surveyed students

The influence of the social environment on the ecological upbringing and education of young people in the period of preadolescence and adolescence is proportional to the collectively adopted values of ecological development. If ecologically sustainable development is intensified in the social environment, social action in that direction will also be strengthened. Conversely, if there is a passive attitude towards this issue, social action will be reduced to a minimum or even turned against ecologically sustainable development. For these reasons precisely, we wanted to determine with a survey in which direction the

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[1] Јакоб Бруновски: *"Осјећај будућности"*, стр. 14, Глобус, Загреб, 1980. године

[2] Макс Вебер: "*Привреда и друштво*", том 1., стр. 15, Просвета, Београд, 1976. године.

influence of the social environment is directed. Table 2 shows the answers to the question, using numbers from 1 to 10, Put in order (from higher to lower) the values that your social environment respects.

If we offered students only one alternative, for example to express themselves for one value, then grade 10 would be the end of our interest. But what could we conclude then? That students live in a social environment that is not honest (not even a single ten), where no one takes care of nature, school has no meaning, and religion, nation and justice are only worth a little more (rated ten by one student). The concept of honesty, hard work and creativity would also be included in the group of the critical value system. We would get a picture of a barbaric social environment dominated by general robbery for material values and fear of disease. By giving students the opportunity to choose from one to ten, we got a nuanced picture of their social environment and value system. And one more thing. It seems to the author that we have received, at least in an abbreviated form, a generic picture of the development of social values throughout history. True, this picture is slightly distorted under the influence of modern factors. Their current presence can reinforce the impression of the importance of some social value in relation to others, which could be determined by subsequent investigations. We have only partially succeeded in this, allowing students to express their personal hierarchy of social values.

Table 2. Ranking list of the values of the social environment according to the opinion of the respondents

Values	Marks									
	10	9	8	7	6	5	4	3	2	1
Honesty	2	5	8	0	0	5	0	4	14	3
Sincere	0	1	2	7	12	4	11	3	0	1
Justice	1	11	10	19	0	0	0	0	0	0
Health	11	17	7	0	0	0	0	0	0	6
Material security	20	7	13	1	0	0	0	0	0	0
Protection of Nature	0	0	0	0	0	13	0	12	4	12
Work and creativity	5	0	8	9	19	0	0	0	0	0
Education	0	0	0	1	7	6	20	6	1	0
Religiosity	1	0	0	1	0	7	9	16	0	7
Ethnicity	1	0	0	4	3	10	1	0	22	0

We will begin the analysis by dividing the grades into three categories: a) the group of highly valued values will include grades 8-10, b) the group of important social values will include grades of 5-7, c) the group of marginal values will include grades 1-4. Another criterion that we will use to help us classify social values is the percentage of respondents. Where it is over 50% we will consider it to belong to one of the three value groups. If it is distributed more regularly so that it does not take precedence in any category, we will classify it in the group of important social values.

Table 3. Grouping of evaluations of the social environment into value categories

Values	Highly valued values %	Important social values %	Marginal social values %
Honesty	36,6	12,2	51,2
Sincere	7,3	56,1	36,6
Justice	53,7	46,3	0
Health	85,4	0	14,6
Material security	97,6	2,4	0
Protection of Nature	0	31,7	68,3
Work and creativity	31,7	68,3	0
Education	0	34,1	65,9
Religiosity	2,4	19,5	88,1
Ethnicity	2,4	41,5	56,1

According to the respondents' opinions, the group of highly valued social values of the students' environment consists of: 1) material security, 2) health and 3) justice. A group of important social values consists of: 1) hard work and creativity and 2) honesty. The group of marginal values consists of: 1) religiosity, 2) nature protection, 3) education, 4) nationality and 5) honesty. We could classify war as an undesirable value.

If we translated this survey into ecosystem languages, the group of highly valued values includes sustainable community and sustainable development. A group of important values would be the improvement and adaptation of work and technology to environmental requirements. The third group, the group of marginal values, would include social categories that are ecologically unsustainable, even though they are the product of society and human civilization. They should be reformed in the direction of ecologically sustainable development. Now we will try to analyze respondents' personal attitudes, for which we mentioned that they can represent a corrective, or at least a comparative factor.

Table 4: Value ranking according to respondents' opinions

Values	Marcs									
	10	9	8	7	6	5	4	3	2	1
Honesty	0	8	1	2	4	4	13	5	0	4
Sincere	4	10	0	3	6	1	12	0	0	5
Justice	0	13	0	7	11	9	0	1	0	0
Health	32	7	2	0	0	0	0	0	0	0
Material security	5	3	9	17	7	0	0	0	0	0
Protection of Nature	0	0	0	1	1	0	1	22	13	3
Work and creativity	0	0	1	0	1	0	1	7	15	16
Education	0	0	9	11	11	10	0	0	0	0
Religiosity	0	0	1	0	0	1	7	8	13	11
Ethnicity	0	0	18	0	0	16	7	0	0	0

We may not have received the expected answers. But objective research is always to a certain extent suspicious of established attitudes. The group of highly valued values, according to our criteria and students' responses, is reduced to one value here - health. The group of important social values would include: 1) nationality, 2) education, 3) justice, 4) material security and 5) honesty; as many as five of the 11 values offered. The group of marginal values consists of 1-3) religiosity, hard work and creativity, and protection of nature

and 4) honesty. We will classify war here as an undesirable value, because it received only 2.4% of supporters, while the others did not rank it.

Table 5. Value ranking according to respondents' opinions

Values	Highly rated values %	Important social values %	Marginal social values %
Honesty	22,0	24,4	53,66
Sincere	34,1	24,4	41,5
Justice	31,7	65,9	2,4
Health	100	0	0
Material security	41,5	58,54	0
Protection of Nature	0	4,9	95,1
Work and creativity	2,4	2,4	95,1
Education	22,0	78,0	0
Religiosity	2,4	2,4	95,1
Ethnicity	43,9	39,0	17,1

Let us try to translate their answers into the language of the ecosystem. Young people are somewhat more static and tend to see highly valued values in black and white. A sustainable community (health) received 100% consent from young people, but without sustainable development. Hard work and creativity (which we classified in the previous analysis under sustainable development) received a low rating from them. Students are more inclined to an idealistic understanding of sustainable development, because first of all, they place ideas in the group of important social values - honesty, justice, school knowledge and national values. For students, religion, nature protection and honesty are ecologically unsustainable categories that need to be urgently transformed in the direction of a sustainable community. The same applies to the previous way of working and creativity.

Very interesting. Each result could find its foothold. Why do students not want to rank war among social values, even with the lowest grade? Does something tell us that from the nature of the human being, in this case the respondents, speaks the troubled ecosystem? Why is there so little trust in honesty among students and in the social environment?

3. FAMILY EDUCATION AND UPBRINGING FOR SUSTAINABLE DEVELOPMENT

Family, as we know it today, is an asset of civilization. According to Lewis Morgan3, barbarian society rests on lineage. Clans were united in tribes, and tribes in confederal, federal or unified alliances, creating the conditions for the emergence of a state or a political society, as he says. Modern family has taken over lineage kinship relations, care for existence (even the function of the economic community) and the role of extension of the human species. With that, the family also took on numerous social functions. Upbringing and education are just one of the achievements of civilization that even the most modern family has not renounced.

We will mark family education as basic and primary education. The first knowledge is obtained in the family. The developmental process up to adolescence, and very often in the adolescent period, is interwoven with family values. What is ecologically sustainable

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[3] **Луис Морган: "*Древно друштво''*, Просвета, Београд, 1981.**

development for the social environment, in the family could be called existence. However, there is not always harmony between these two terms. Family education is characterized by:

a) particularity,

b) pragmatism,

c) systematicity,

d) dogmatism,

d) emphasized emotionality,

f) inviolability of the educator's authority.

Particular upbringing and education in family circles implies that, no matter how developed common social values are, children in each family are brought up according to special programs and opportunities, from one family to another. Although these programs are unwritten, almost as a rule they reflect the social position of the family in the social environment, religious affiliation, and consanguineous relationships. The family is a filter of social values. They will be accepted only if they are in line with the particular interests of the family.

Religious affiliation conditions the interpretation of environmentally sustainable development. The agrarian character of patriarchal families allowed for upbringing in harmony with nature. Growing up in harmony with nature also meant increasing the role of each individual, from a passive observer - what the elderly do - to collaborators in the performance of certain jobs. Thus, the child in the "nursery", with the help of his guardians and educators, observed certain natural phenomena, learned to respect and use them, and over time became an equal member of the household.

However, the particularity of the upbringing and education would be noticeable as soon as one moved to families with other professions. Children from families of other religions experienced a different nature at an early age. Instead of collecting scattered beans in the yard, they would collect small nails in a craftsman's workshop or stack parents' books. That is why particular education can also be called confessional education. It meant looking at nature through the prism of family members' religions.

From their earliest childhood, the future bearers of the human community faced different, sometimes conflicting values. If we take the moment of birth as a starting point and follow the child's development through various forms and institutions of education, we will see that their view of the world (nature) moves away over time from the first "lessons" they learned in the family. Why? The first knowledge about the world is essentially of a pragmatic character, almost existential; what is especially important, it is limited to the interest and need of the micro community to be maintained in the context of wider social interests and natural laws. The benefits and even the existence of families are different. From family to family. The life of families is not at the same distance from the existence of nature. In one moment, the family can invest all its energy in the sustainable development of nature, and in another, it can act as a robber of the most valuable natural resources. For example, a farming family at one time invests maximum effort to cultivate the land and sow it with seeds of various plants. In another moment, the same family is ready to spread huge amounts of pesticides on the same land, in order to protect the development of sown plants from wild and undesirable ones. We can cite similar examples when it comes to inorganic nature. Particular interests of families dictate both the method and content of upbringing and education for sustainable development.

Overcoming particularity is achieved through shared social values. In their creation, the family submits to the requirements of social institutions. The most important institutions of society that create a system of social values in a patriarchal community are government

institutions (the state), educational institutions and cultural institutions (first of all, the church). In proportion to the range between line A and line B, extends the system of misunderstandings between government institutions and culture on one side and nature on the other, while this misunderstanding is somewhat smaller between individuals (h, y, z) and nature (B), i.e., social values (A). In Sketch 1 we also see that social values are an expression of the antagonism of the lawfulness of the development of nature and society. With the development of civilization, social values multiply - antagonism multiplies. However, the importance of social values lies in their diagonal character. Within them, the struggle of antagonistic forces takes place, and hence they represent a compromise of society (government and human culture) with the natural system. For patriarchal upbringing and education, no matter how close it was to the laws of nature, it must be noted that it could not bypass the general civilizational antagonism of man and nature. Hence, it is wrong to equate patriarchal upbringing and education with natural upbringing. It does not have enough knowledge about natural laws, and about social expectations. Its particularistic character in the later phase necessarily exceeds institutional upbringing and education. In contrast to the patriarchal one, this upbringing and education represents a systematic adaptation of the requirements of line A and line B to the age, understanding and interests of the students. At a later stage, institutional upbringing and education will bring together the viewpoints of differently educated children.

The pragmatism of family education is manifested on the one hand as a good methodical basis - applied knowledge - and on the other hand as the achievement of short-range social goals. Instead of permanent efforts to make ecologically sustainable development a principle of upbringing and education, the family nurtures pragmatic sustainable development. But, when asked how their parents would react if you left your own forest on a stump, 30 students believed that they would be condemned by their parents, seven that they would approve it if it was in the interest of the household, and three that they would remain indifferent. This means that pragmatic sustainable development, nurtured by the family, and ecologically sustainable development do not always coincide.

The systematicity of family education, regardless of the qualitative level at which it is implemented, stems from the care and need to adopt family values as one's own attitudes. Even those parents who seem to leave their children free to choose are naturally interested in their success. Family upbringing is associated with circling around the object of work until it is adapted to the demands of the educators (parents). However, family systematicity corresponds more to the term persistence than pedagogical systematicity.

The dogmatic nature of patriarchal upbringing and education is partly a consequence of the intolerance of natural laws, and much more due to the pedagogical experiences of patriarchal educators. Outside dogma, there is a world of negations. "Not that!". The interest of the child's creative spirit to check each thing or phenomenon in advance is doomed to negation. That is why we can say that patriarchal upbringing and education basically fosters two methods of reaching knowledge: dogma and negation. The first method is based on verified truths, most often experiential, and the second on the prohibition of doubt or the overthrow of ingrained dogmas. The methodological approach of patriarchal upbringing and education is conservative. Proponents of this way of upbringing and education attribute an ecological character to it. Allegedly, most dogmas are an expression of the compromise between human experience and nature. They reflect the balance of natural and social demands by calling for refraining from destroying nature. If, however, we doubt the numerous dogmas that contain the most humane and ecological viewpoints, we will see that

the balance has not been achieved thanks to human consideration for nature, but rather the impotence of "savages" to subordinate nature to themselves. With the development of the productive forces, numerous exceptions, even legalities, emerged from the dogmas, which could no longer be defended with the old truths. This also undermined the practice that forbade children's interest in new strongholds in the ruling truths. If we go back to Sketch 1, we will see that the antagonism of line A and line B is not a confrontation between this world and the world beyond, but that it is about observing the opposites of the general (B) and the particular (A) within a unique ecosystem. The cracking of dogmas occurs as a product of their stretching over different time distances. As children are witnesses and active participants in those cracking's, it is normal to expect them to ask themselves and the environment - what led to that? They are not satisfied with the patriarchal educational method ("Not that!"). On the contrary. Such a methodical approach leads them to doubt all the dogmas they acquired through this upbringing and education, including the system of the patriarchal community itself.

Emphasized emotionality in patriarchal education is a consequence of the blood relationship, that is, the natural similarity, of the educator and the educated. The entire process of upbringing and education is permeated by the teacher's fear for the success of the student, from detail to detail. We say, by fear. We did not say by love. Have we switched theses? Love implies responsibility and the fear of losing something loved. But that only applies to intense love. There are also loves of lower intensity. Even simple interest requires love. Abandoning interest, if it is not punishable by anything, also implies transferring love to a new object or phenomenon that we observe. Therefore, love is not an adequate term to emphasize the emotionality of patriarchal upbringing and education. Fear is a phenomenon or process of stronger and more permanent intensity. Emphasized emotionality is the result of rationalized fear. There are many elements of love in rationalized fear: willingness to protect the student, willingness to sacrifice for the student, willingness to persevere in overcoming obstacles with the student, understanding of the student's limited abilities, emotional experience of success and failure of the student, responsibility for the student's maturation, and similar. Those qualities are more strongly expressed in patriarchal than in institutionalized upbringing and education. True, emphasized emotionality can produce negative consequences for the student. Increasing the degree of tolerance can lower the threshold of interest and the threshold of knowledge. At a low level of development of the productive forces, this deficiency is not so much expressed. Minimizing the critical dimension in the educational process threatens to create permanent frustrations at a later age of personality development. Regardless of the fact that emotionality is an important dimension of the life of a human individual, without which one cannot imagine great undertakings and the development of the will of any individual, empty voluntarism is as dangerous as panicked fear. In contrast to emphasized emotionality, rational emotionality should be developed as a multidimensional category of human traits. In those spaces, there must be room for other people, for the Planet, for the life and survival of all.

The authoritarianism of the educator or the inviolability of the authority of the person who educates stems from the previous features of patriarchal education. With the first breath of air, the student is directed to the mother and her associates in the family. He/she cannot survive without them. From them he/she acquires the first knowledge of the world in which they find themselves. They teach them communication and protect them from hostile forces. The members of the primary community are the true authorities for the young person. Unlike educators in preschool institutions, who can be said to share their authority with the family, in

a patriarchal community educators have indivisible authority. A child can develop even under the pretense that father, uncle, grandfather are mere forms of one and the same authority. When a child is no longer breastfed, that is, when the individual enters the true process of socialization, the grandmother can have more authority than the mother or just formally be a different authority. Recognizing the content of authority will be realized over time through the process of socialization. That process will reveal another side of authority to a child. Authority based on natural power will lose more and more importance in the name of authority based on the levers of power of economic and social influence.

But let us go back to upbringing and education in a patriarchal family. Authoritarianism of educators is a consequence of the previously mentioned features of patriarchal upbringing and education. On the other hand, authoritarianism necessarily produces such upbringing and education. Should a child doubt the truths of the one who gives him life? Does it have any ideas about a different way of life outside of its own family? How could that child not like the benefits given to him, at least initially, by the members of the primary community? And God, feeling the love of man for himself, loves man. Between authoritarianism, on the one hand, and dogmatism, particularity, and emotionality on the other, there is a strong mutual connection. The tendency of dogma, emotions, and particularism to oppose the development of productive forces and changes in the thinking of the eco system conditions the transformation of authority, from the natural to the authority of the government. Thus, the socialization of the child at the earliest age of the patriarchal community necessarily experiences a transformation from love of authority to fear of authority. If the new authority is cognitively more limited, the danger to upbringing and education is greater. What is lost in the first days of upbringing and education is difficult to make up later. Why? Instead of a creative spirit, frustrations moved into the young personality. Instead of an offensive spirit, bad conformity moved in. The path to a personality that manifests creative abilities could be realized only after the removal of ill-acquired traits, i.e., after personality's healing. It is a long and arduous process, most often unattainable.

It is certain that many ecologists expect a recipe for upbringing and education in the family. They see that upbringing and education play a big role in sustainable development. Also, they attach great importance to upbringing and education from the very beginning of the socialization process. It is not difficult to discover that the process of socialization takes place in parallel with family upbringing and education, as well as that the family has retained essential elements of patriarchal social relations. But there is no recipe. It is futile to look for it. On the other hand, sustainable development does not exist in the form of a recipe either. It is not some ideal or material state to be conquered. Everything is a process. We emphasize that sustainable development is a process. Education is a process. There was sustainable development to a certain extent, and even to a sufficient extent, in the patriarchal community. It also exists to some extent in today's patriarchal family. However, it is a fact that for patriarchal upbringing and education it is becoming more and more difficult to withstand the criticism of modern production forces and people's way of life. It is increasingly becoming unsustainable education. Is the way out in reducing the number of family members? Or is the way out in increasing the literacy of the population? Quantitative indicators can sometimes give only cosmetic results. But, without quantitative analysis, it is difficult to knock on the door of qualitative hypothetical judgments. The modern Macedonian family is atomized in relation to patriarchal cooperatives. The tendency of further atomization is expressed. The percentage of illiterates is rapidly reduced. Well, still, sustainable development has come into question even more. First of all, it affected the birth rate. Despite

the apparent population growth, Macedonia has been affected by the declining birth rate. If the burden of the increasingly difficult task of sustainable development falls on the backs of fewer and fewer children, the question arises, what kind of magic wand should the upbringing and education of the youngest be to persevere in preserving their own region and their own Planet? Patriarchal upbringing and education were a kind of response to the participation of a large amount of live labor in sustainable development. In conditions of low birth rate, live labor disappears. Can literacy by itself compensate for lack of hands? Is upbringing and education a strong enough means of work so that the ever-decreasing population in perspective maintains the development of the territory whose area does not change? Or will Macedonia enter a new cycle of immigration? Namely, in an effort to solve basic existential issues as soon as possible, immigrants view the living environment primarily as a tool, and not as nature with which future generations should live. They are subject to dual education. They subordinate more permanent sustainable development to ongoing sustainable development. The first knowledge about the more permanent goals of sustainable development is acquired in school, while in the family they are brought up for bare survival. Also, patriarchal upbringing definitely failed the test of sustainable development. It has become petty-proprietary, narrow-minded, and completely anti-ecological upbringing and education. Maybe it was this fact that led ecologists, primarily naturalists, to look for a recipe for a new school? And, as we said, there is not one. Education comes from life. As life is a process, more precisely a sustainable process, so is upbringing and education a process of preparing young being for sustainable development. If patriarchal upbringing and education has become incompatible with sustainable development, upbringing and education by its very nature is compatible with ecosystem sustainability.

4. PRESCHOOL EDUCATION AND UPBRINGING

Preschool institutions are not officially part of the institutionalized school system, although the process of upbringing and education in them is carried out according to the programs of nurseries, kindergartens, and preschools. As long as there are programs, there are educational goals. Sustainable socialization is a global educational goal. If an educational goal is formulated, upbringing or drill must follow. As the process of acquiring knowledge and turning it into beliefs is non-violent and creative, we can conclude that educational forms are mostly filled with educational content.

What is sustainable socialization? With this term, we would indicate a relatively wide range of activities and behavior of students in relation to the system of adopted social norms. Written and unwritten social norms promote what is valuable and what is undesirable for the human community. They are used for telling people what to do and what not to do. Some norms also determine the hierarchy among values or prohibitions. However, a very small number of norms are clearly completely defined, which means that they imply a certain degree of deviation without the norm being violated, i.e., it remains viable. Without going into the reasons and nature of norms, we can state that sustainable socialization provides an opportunity for unequal human abilities to manifest themselves, without violating the system of social values. Only in those cases where the social value is strictly defined, the norm foresees the drilling of pupils. Well, even then we could conditionally say that it is in the function of sustainable socialization.

Table 6. Schematic example of preparing children for socialization in preschool institutions

Sustainable socialization		Preschool education and upbringing		
Norm/value	Methods of realization	Preparation of children	Methods	Final effect
Social division of labor	Technical division of labor	Division of roles in the educational group	Designing and children's play with toys	Spotting a talent or ability
	Functional division of labor		Division of roles in dramatized works	Acquiring knowledge about the division of jobs and roles in society
	Political division of roles		-	-
Preservation of the environment	Mental and material hygiene	Transmission of knowledge and habits, division of roles	A conversation or lesson about respecting values	Acquiring knowledge and habits to respect values
	Waste removal and recycling		Collection, cleaning and waste processing actions	The science of recycling and how to dispose of waste
	Natural parks and reserves		Tour of gardens and parks, division of roles with themes from the animal kingdom	Understanding biodiversity, i.e., that everything alive wants to survive

Sustainable socialization implies the preparation of pupils to assume promising social roles. With educational content, they try to project or improvise circumstances in which the child ceases to be who it truly is, and actions and procedures are designed in the direction of their understanding. Table 2 shows the pre-school method of preparation for sustainable socialization. On the left side sustainable socialization and the ways in which it is realized in the social community are shown, and on the right side is the work and the final effects of preschool education. It should be noticed that on the left side, "designing", "game", "action", "division of roles", and "conversation" are mentioned. Sustainable development would expand the meaning of these terms. Thus, in sustainable socialization and sustainable development in general, the following terms would correspond to designing: designing, planning; games - work, application of science and technology; division of roles - social-functional stratification; conversation - discussions, polemics, round tables, forums, congresses, conclusions, etc.; actions - actions, anniversaries, traditional manifestations, movements...; visiting (parks and gardens) - scientific research endeavors, scientific discoveries, theoretical reasoning, and the like.

Upbringing in preschool institutions is very close to the sustainable development of society and nature, both in terms of mastering educational content and in terms of methods of action. The directions of educational content are nature and society in their unity. Understanding of the causality of nature and society, and the responsibility of the human individual for maintaining the balance in the living environment will grow over time, but it will never produce such strong inner feelings of belonging to biodiversity as in those years. A child is like a torn off part of a red-hot star. Flying out of the realm of nature into some other realm, it carries visible traces of its stellar or natural past, and then, merging with the new

environment (growing up), it becomes a man who forgets his own origin. In preschool institutions, the child is exposed to opposite tendencies at the same time. On the one hand, it learns sustainable socialization and sustainable development, and on the other, it suppresses its wild nature, torn away from sustainable development. From that and such nature, it should recognize only those potentials and driving mechanisms that can be in the function of sustainable social development or else adapt them to the requirements of sustainable development.

5. PEDAGOGICAL ASPECTS OF EDUCATION AND UPBRINGING OF PRE-ADOLESCENT AND ADOLESCENT YOUNG PEOPLE FOR SUSTAINABLE DEVELOPMENT

Pedagogical aspects could be defined as special points of view of overall sociological efforts and projects on the role of upbringing and education in the formation of desirable or intentional goals for the social community. What makes pedagogy the general science of upbringing and education is the subject itself - upbringing and education or the process, as Talcott Parsons would say, of turning a barbarian into a civilized man. It is realized in many ways and forms, which we have already hinted at. Here we are interested in institutional upbringing and education - the highest reach of pedagogy as a social science. Regarding institutional upbringing and education, Jakov Kisjuhas says that it is "part of a planetary organized system in which the interwoven demanding systems of the economy and infrastructure function with the nomenclature of occupations and educational standards for all activities individually'".

Institutional pedagogy in our country, when it comes to preschoolers, rests on the school organized system of upbringing and education. It is characterized by publicness and accessibility, under equal conditions, to all interested categories of the population up to preadolescent and adolescent age. Hence, institutional pedagogy is developed through the public school system. The public school system, from the point of view of our topic, is characterized by:

Upbringing and education of young people based on pedagogical theory, and thus on pedagogical principles;

Dominant participation of the state and state authorities in the conception, financing and supervision of the realization of upbringing and education;

Effort to transfer ecology as a science into the consciousness and practice of students.

In order to answer our title topic, we would have to start from conceptual categories. Then, monitor and analyze educational plans and programs. By checking, using a sample, it is necessary to measure the degree of influence of the school educational efforts on the formation of students' attitudes; to critically offer alternative solutions, which cannot be anything other than hypotheses, because the nature of this paper limits us in this.

CONCLUSION

The subject of research in this paper was environmental upbringing and education of the population of the preadolescent and adolescent period in the Republic of North Macedonia. In addition to the analysis of the content of documents and literature, we incorporated the results of a survey of students of the Faculty of Educational Sciences of the University "Goce Delcev" in Stip into the theoretical treatment of this topic.

By surveying students, we discovered that most of them got their first knowledge about ecology in elementary school, and a little less in the family. Therefore, we consider that it is necessary to carry out a critical review of these two institutions. Critical observation

of the family and preschool upbringing and education was carried out by simple observation and empirical observation of the factors. For more studious research, of course, parents themselves and other family educators who have an influence on the upbringing of a young being should be surveyed.

Preschool upbringing and education were viewed in the light of the choice of methods of upbringing and education. Analogous to the development of human consciousness, which was conceived in the lap of myths and fairy tales, the consciousness of a modern individual is also developing from a child's fairy tale image of the world to a realistic consciousness. It was this comparison that should have served to make civilizational experiences in environmental education a methodological practice.

By analyzing the contents of the documents by which the Government of the Republic of North Macedonia regulated education in primary and secondary schools, we concluded that there is ecological substance in them. It is systematically arranged and develops from introducing students to the environment, through elementary ecological knowledge to efforts to form attitudes among students.

However, our calculations of the fund of lessons dedicated to ecology showed that:
It did not give enough time for considering the complexity of the ecological matter;
It did not pay enough attention to practices in the area of environmental action;
In such narrow time circumstances, they could not become the only, or even the dominant factor in the process of forming students' ecological attitudes.
The offered teaching contents are colored by biologism. Natural laws are presented in the Euclidean sense, as a simple and lawful derivation of phenomena, events, and processes from the previous state. The ecosystem is far from human practice, human history, and spatial factor. Even in high school, history and geography, for example, are not connected to ecosystem processes. Thus, ecology in upbringing and education experienced the fate of other sciences - reduction to dogma or fundamentalism.

Our survey showed that secondary school students did not go beyond the understanding of ecology as the science of the environment. They give preference to ecology as an exact and not a complex science. Thus, the concepts of sustainable development, waste recycling and biodiversity are not associated with environmental problems by most students, as much as water, air, and soil pollution, although these last concepts are part of sustainable development caused by the human factor.

By surveying high school students, it was shown that the habits and will to work on ecologically sustainable development have been partially built. A low level of readiness for environmental activism in one's own environment was expressed. Also, professional-theoretical training is welcomed only if someone professional is "preparing the newsletter". Although, at first glance, there is nothing unusual in the last sentence, pedagogues could notice that high school students are not yet ready for individualization, and self-education is a distant vision - almost unattainable.

By offering possible hypotheses for the improvement of environmental education and upbringing, the intention of the author of the paper was to return upbringing and education to the original meaning of those terms, and the school to gain a dominant place in the formation of student attitudes. Instead of "feeding" dogmas and theories, we propose educating habits. Instead of partial education in subjects that are independent from each other, complex upbringing is offered. In complex education subject teachers must cooperate through professional teams. It breaks with the practice of independent and untouchable teacher authorities. The pedagogical council ceases to be a teachers' lounge and becomes an institution for the realization of the goals of upbringing and education. A grade, a class, is no longer a sum of the present students, but a team that implements educational tasks.

References

A. A. Niyazova, R. H. Shaimardanov, Method of designing the technology of continuous socio-ecological education of the future professor at the university, 58 (2020)

Brügger, A., F.G. Kaiser, and N. Roczen. 2010. "One for All? Connectedness to Nature, Inclusion of Nature, Environmental Identity, and Implicit Association with Nature." European Psychologist 1: 1–10. Promoting Connectedness with Nature

Bruni, C.M., and P.W. Schultz. 2010. "Implicit beliefs about self and nature: Evidence from an IAT game." Journal of Environmental Psychology 30 (1): 95–102.

Buttel, F.H. 1979. "Age and Environmental Concern: A Multivariate Analysis." Youth and Society 10 (3): 237–56.

Buttel, F.H., and W.L. Flinn. 1978. "Social class and mass environmental beliefs." Environment and Behavior 10 (3): 433-50.

Cheng, J.C.-H., and M.C. Monroe. 2010. "Connection to Nature: Children's Affective

Attitude Toward Nature." Environment and Behavior 44 (1): 31-49.

Clayton, S., ed. 2003. Environmental identity: A conceptual and an operational definition. With the assistance of S. Clayton and S. Opotow. Identity and the natural environment: The psychological significance of nature. Cambridge, MA: MIT Press.

Cohen, J. 1992. "A power primer." Psychological Bulletin 112: 155–59.

Davis, J.L., J.D. Green, and A. Reed. 2009. "Interdependence with the environment: Commitment, interconnectedness, and environmental behavior." Journal of Environmental Psychology 29: 173–80.

Ernst, J., and S. Theimer. 2011. "Evaluating the effects of environmental education programming on connectedness to nature." Environmental Education Research 17 (5):577–98.

E.V. Girusov. The Age of Globalization, 1 (2015)

Ewert, A., G. Place, and J. Sibthorp. 2005. "Early-life outdoor experiences and an individual's environmental attitudes." Leisure Sciences 27 (3): 225–239.

Fančovičová, J., and P. Prokop. 2011. "Plants have a chance: Outdoor educational programmes alter students' knowledge and attitudes towards plants" Environmental Education Research 17 (4): 537–51.

Field, A.P. 2009. Discovering statistics using SPSS: (and sex and drugs and rock 'n' roll). 3rd. Los Angeles, London: SAGE Publications.

Frantz, C., F.S. Mayer, C. Norton, and M. Rock. 2005. "There is no 'I' in nature: The influence of self-awareness on connectedness to nature." Journal of Environmental Psychology 25 (4): 427–36.

Hinds, J., and P. Sparks. 2008. "Engaging with the natural environment: The role of affective connection and identity." Journal of Environmental Psychology 28 (2): 109–20.

Hirsh, J.B. 2010. "Personality and environmental concern." Journal of Environmental Psychology 30 (2): 245–48.

IUCN, UNEP, WWF 1991. Caring for the Earth: a strategy for sustainable living: London: Earthscan Publications.

Jordan, M. 2009. "Nature and Self—An Ambivalent Attachment?" Ecopsychology 1 (1): 26–31..

Kaiser, F.G., N. Roczen, and F.X. Bogner. 2008. "Competence formation in environmental education: advancing ecology-specific rather than general abilities." Umweltpsychologie 12 (2): 56–70.

Kantomaa, M.T., T.H. Tammelin, S. Näyhä, and A.M. Taanila. 2007. "Adolescents' physical activity in relation to family income and parents' education." Preventive Medicine 44 (5): 410–15.

Klineberg, S. L., M. McKeever, and B. Rothenbach, B. 1998. „Demographic predictors of environmental concern: It does make a difference how it's measured." Social Science Quarterly 79 (4), 734-753.

Kohan, W. O. (2018) 'Paulo Freire and Philosophy for Children: A Critical Dialogue', Studies in Philosophy and Education, 37(6). doi: 10.1007/s11217-018-9613-8.

Kopnina, H. (2020) 'Education for the future? Critical evaluation of education for sustainable development goals', Journal of Environmental Education. doi: 10.1080/00958964.2019.1710444.

Kossack, A., and F.X. Bogner. 2011. "How does a one-day environmental education programme support individual connectedness with nature? Journal of Biological Education." Journal of Biological Education, 1–8.

Mayer, F.S., and C. McPherson Frantz. 2004. "The connectedness to nature scale: A measure of individuals' feeling in community with nature." Journal of Environmental Psychology 24: 503–15.

Mejía-Cáceres, M.A., Huérfano, A., Reid, A. and Freire, L.M. (2021) Colombia's national policy of environmental education: A critical discourse analysis. Environmental Education Research, 27(4), pp.571-594.

Nisbet, E.K., J.M. Zelenski, and S.A. Murphy. 2009. "The nature relatedness scale: Linking Individuals' connection with nature to environmental concern and behavior." Environment and Behavior 41 (5): 715–40. Promoting Connectedness with Nature

Parra, A., and A. Oliva. 2009. "A longitudinal research on the development of emotional autonomy during adolescence." The Spanish Journal of Psychology 12 (1): 66–75.

Parker, L. and Prabawa-Sear, K. (2019) Environmental education in Indonesia: Creating responsible citizens in the global South?, Environmental Education in Indonesia: Creating Responsible Citizens in the Global South? doi: 10.4324/9780429397981. Payne, P. G. and Hart, P. (2020) 'Environmental education, democracy, Thunberg, and XR', Journal of Environmental Education, 51(4). doi: 10.1080/00958964.2020.1744109.

Phenice, L.A., and R.J. Griffore. 2003. "Young children and the natural world." Contemporary Issues in Early Childhood 4 (2): 167–71.

Poortinga, W., L. Steg, and C. Vlek. 2004. "Values, environmental concern, and environmental behavior." Environment and Behavior 36 (1): 70–93.

Potter, G. 2010. "Environmental education for the 21st century: Where do we go now?" The Journal of Environmental Education 41 (1): 22–33.

Rickinson, M.. 2001. "Learners and Learning in Environmental Education: A critical review of the evidence: Environmental Education Research." Environmental Education Research 7 (3): 207–320.

Schneider, T. 2004. "Der Einfluss des Einkommens der Eltern auf die Schulwahl: The influence of parental income on school choice." Zeitschrift für Soziologie 33 (6): 471–

Schultz, P. W., and J.J. Tabanico. 2007. "Self, Identity, and the Natural Environment: Exploring Implicit Connections With Nature." Journal of Applied Social Psychology 37 (6): 1219–47.

Schultz, P.W. 2001. "The structure of environmental concern: concern for self, other people, and the biosphere." Journal of Environmental Psychology 21: 327–39.

Schultz. P.W. 2002. "Inclusion with nature: The psychology of human-nature relations." In Psychology of sustainable development. Edited by P. Schmuck and P.W Schultz, 61–78. Boston, Dordrecht, London: Kluwer Academic Publishers.

Schultz, P.W., C. Shriver, J.J. Tabanico, and A.M. Khazian. 2004. "Implicit connections with nature." Journal of Environmental Psychology 24 (1): 31–42.

Stocké, V., H.-P. Blossfeld, K. Hoenig, and M. Sixt. 2011. "Social inequality and educational decisions in the life course." Zeitschrift für Erziehungswissenschaft 14 (2): 103–19.

UNESCO-UNEP 1976. The Belgrade charter. Connect: UNESCO-UNEP Environmental Education Newsletter, 1 (1): 1-2.

Wells, N. M., and K. S. Lekies. 2006. "Nature and the life course: Pathways from childhood nature experiences to adult environmentalism." Children, Youth and Environments 16 (1): 1–24.

V. S. Shilova, Int. J. of Experimental Education, 7, 158 (2015)

Stavreva Veselinovska, S. (2023). Sociopedagogical aspects of environmental education of preadolescents and adolescents as a function of sustainable development. Vospitanie- Journal of Educational Sciences Theory and Practice, Vol. 18, No. 2, 2023

Wijesooriya, N. and Brambilla, A. (2021) 'Bridging biophilic design and environmentally sustainable design: A critical review', Journal of Cleaner Production. doi: 10.1016/j.jclepro.2020.124591.