The European Proceedings of
Social & Behavioural Sciences
EpSBS

ISSN: 2357-1330

https://doi.org/10.15405/epsbs.2019.08.03.274

EDU WORLD 2018
The 8th International Conference

THE IMPACT OF STUDYING ENVIRONMENTAL EDUCATION ON THE THINKING OF PRESCHOOLERS

Ileana Gurlui (a)*
*Corresponding author

(a) University of Pitesti, Faculty of Education, Social Sciences and Psychology, gurluiileana @ yahoo.com

Abstract

Ecological education as an important area of study provides the opportunity for teachers in preschool education to present children with objects and phenomena in a relationship of interconditioning and to make them understand the danger of natural imbalance determined by human influence. It is necessary that the discovery of the environment, the complexity of its components, its functions and processes, the dangers of overexploitation and pollution, begin as early as possible. This type of education becomes more effective by fostering learning in as varied contexts: formal, non-formal, informal. It is recommended to start from an early age, through the active involvement of the family, other professional categories, even non-governmental organizations in the educational process. Starting from the premise that the goal of ecological education is to prevent environmental damage, man has to act consciously to maintain and continually improve his / her quality. At present, human society faces a number of negative issues: limitation of reserves and natural resources, continuing environmental degradation, global warming effects, etc. Ecological education seeks to stimulate knowledge and awareness of the need for horses, means and objectives in protecting and improving the environment. The main considerations are: • making a complex image of the environment, as a totality of natural factors and those created by human activities; • understanding the importance of each natural environmental factor; • presentation of elements of the human-environment relationship; • description of the consequences of pollution; • knowledge and observance of environmental regulations and regulations.

Keywords: Ecological education, pollution, formal learning, informal and non-formal, non-governmental organizations.

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

Through ecological education we understand "... the process through which values and clarified concepts are recognized in order to develop the skills and attitudes needed to understand and appreciate the relationships between man, the culture to which he belongs and the biophysical environment. Ecological education also includes the practice of making a decision and formulating a code of conduct on environmental quality"(The Conference on International Unity for Preserving Naturei, Nevada, 1970). The analysis of the concept of ecological education includes two essential notions: the natural environment and the degradation of the environment. The natural environment is defined as "the set of natural conditions and elements of the Earth: air, water, soil, subsoil, landscape features, all atmospheric layers, all organic and inorganic matter, and living beings, natural interaction systems, the elements listed above, including material and spiritual values, quality of life and conditions that can influence human well-being and health "(The Government Urgency Law no.195/2005). Environmental degradation is a process of altering the quality of the environment due to the irrational use of resources, pollution and urban agglomerations. Environmental quality and environmental degradation (defined as affecting ecological balance and quality of life, mainly caused by anthropogenic pollution) interact, influencing each other. Environmental education is not just a form of education, an instrument for solving environmental problems or resource management but it is an essential dimension in the recognition of environmental values with the aim of improving the quality of life. This type of education seeks to induce, especially in schools, some knowledge that will lead to the formation of skills, motivations and values that stimulate personal development and assuming responsibility for the decisions taken to maintain the quality of the environment (Geamănă, Dima, & Zainea, 2008).

In the learning process, ecological education is viewed through three key approaches:

- Environmental education that provides understanding of the functioning of natural systems, the impact of human activities on natural systems, develops investigative capabilities and critical thinking, forms the cognitive support on which to make environmental decisions.

- Environmental education ensures the formation of practical learning experience through direct contact with environmental components, develops data collection and field investigation skills, stimulates environmental concern.

- Environmental education - develops environmental responsibility, motivation and skills to participate in improving the quality of the environment, promotes the desire to address a lifestyle that is compatible with Sustainable development offers teachers the opportunity to contribute with their students to the proper management of natural resources (Gurlui, 2014).

Educational systems, responding to the new global political priority, reacted promptly, expanding the research area, promoting new concepts such as ecological education, nature conservation education, concepts that seek to solve a series of problems and reconsidering the process and purpose of education by the fact that man cannot exploit endlessly and without following the resources of the planet. (Petre, Ivan, & Roman, 2006). At an early age, it is necessary to create a global education to facilitate the transition of the child from pre-school to primary (Tudor, 2015).

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

2. Problem Statement

Ecological education is a process that aims to improve the quality of life by providing people with the "tools" they need to solve and prevent environmental problems. Environmental education can help people gain the knowledge, skills, motivations, values and commitment they need to efficiently manage their earth's resources and take responsibility for maintaining environmental quality. Environmental issues are urgent and need to be addressed by the whole community, and education must be an integral part of the solution (Bălăceanu, 2013). The divergent views on the state of the environment, the consequences of its degradation and the role of education are good subjects for discussion and debate. Also, ecological education can help people learn how to think - including how to solve problems, make decisions, weigh options and align values with personal actions. The objectives of environmental education around the world are similar:

- to protect and where necessary to restore the structure and functionality of natural systems;
- to stop the loss of biodiversity;
- to protect soil against erosion and pollution, etc.

Proposed actions to achieve the objectives:

- protecting the most precious habitats;
- implementing different plans to protect biodiversity;
- developing a strategy to protect the marine environment;
- extension of regional and national programs relating to forest management;

On the other hand, ecological education enhances problem awareness and understanding of personal values by "discovering" attitudes and understanding, helping students to assess and clarify their feelings about the environment and how it contributes to its problems. It helps each person to understand that people have different values, and conflicts between them must be addressed to ultimately prevent and solve environmental problems. Environmental education is also a practice, in the sense of learning things like planting a tree to reduce consumption, or how to live, producing a negative impact on the environment as little as possible (Ivănescu, 2007).

Specifically, environmental education emphasizes these five objectives:

- Awareness: understanding and sensitivity to the environment and its problems; develops the ability to understand and differentiate incentives, process, refine and expand these perceptions; contributes to the use of these new skills in several contexts.

- Knowledge: basic understanding of how the environment works, how people interact with the environment and how they appear and how to deal with environmental issues.

- Attitude: a set of values and feelings of care for the environment, motivation and devotion to participate in maintaining the quality of the environment.

- Skills: the skills needed to identify and investigate the problems of the environment and to contribute to solving the problems of the environment.

- Participation: Experience in using the acquired knowledge and skills for positive and well-thought-out actions that will lead to solving environmental problems.

Ecological education is a process designed to attract categories of people who are aware and concerned about environmental issues and complementary issues, people who have the knowledge, attitude,

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

ability, motivation and ability to work individually and collectively to find solutions to current problems but also to prevent the appearance of others (Fodor, 1996).

The research focuses on highlighting the implications of studying environmental education on large group pre-schoolers, more specifically on how they perceive and represent the environment. Ecological education activities took place in the large group during a school year, where all the planned content was transmitted and where the consolidation and evaluation of knowledge was permanently pursued. Interactive work methods, age-matched, all activities have an integrated character. Pre-schoolers in the experimental group have been stimulated to broaden their knowledge horizons, having a rich teaching material, to develop positive attitudes towards the environment, care and protection skills, etc., have taken part in visits and walks etc. The results of these actions materialized in ecological education portfolios of pre-schoolers, consisting of paintings, drawings, independent work records (Burcu, & Burcu, 2005).

3. Research Questions

1.How does environmental education in the kindergarten contribute to the personal development of the preschool child?

2.Does the study of ecological education in the kindergarten influence the ability to analyze the surrounding reality of preschoolers?

3.Do preschoolers assimilate more effectively when they actually participate in the building of their own knowledge, being actively involved, when they are simple information receivers?

4. Purpose of the Study

The paper aims to present the effects of studying environmental education on the thinking of pre-schoolers and the ability to analyse the surrounding reality.

The study of ecological education in the kindergarten influences the ability to analyze the surrounding reality of pre-schoolers.

5. Research Methods

In order to achieve the proposed goal and to verify the hypothesis, we conducted the research during the school year 2017 - 2018, at two large groups at the Alexandria Kindergarten in Alexandria, on a sample of 36 subjects. The activities took place in the group room, but also outside the kindergarten, using various methods and didactic means. A group of 18 children participated in educational activities with ecological themes. The other, the witness group, was made up of 18 preschool children, but they were not involved in ecological education projects.

Methods and techniques of work

To carry out the research, we used the experimental and knowledge testing as data collection methods

6. Findings

The research was conducted in three stages:

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. The pre-test stage consisted of applying a knowledge test and a practical test to determine the pre-school level of initial purchases before the intervention.

2. The formative stage consisted in teaching-learning of concepts of ecological education to the experimental group, respectively the absence of this intervention in the control group.

3. The post-test step consisted in repeating the initial measurement, after the groups were exposed to the two conditions of the independent variable (presence and absence of intervention).

a) Pre-test stage

During the first two weeks of the school year 2017/2018, we carried out the initial evaluation of the two groups of subjects, using the knowledge test and the practical test, applied to all pre-schoolers under identical conditions. The results obtained were equally sensitive.

b) Formative stage

This stage consisted of the teaching of various concepts of ecological education to the experimental group. Optional activities of ecological education were carried out using interactive methods - Lotus Technique, Cube, Pyramid and Diamond, Thinking Hats, Mysterious Journey, Riddles, Tour of the Gallery, Blazon Technique, Star Explosion, Experiment, etc.

Various oral, written and practical samples were applied to each subject, the products of the activity being kept in children's portfolios, specially created for optional discipline.

In April, pre-school children from the experimental group went through the thematic project called "S.O.S. Earth, "and they have proposed to carry out an analysis of the current situation on our planet, severely affected by pollution. Children have developed their sensitivity to environmental issues, and have formed Earth-protection skills - saving electricity and water, recycling materials, plant and animal care. They listened to a series of poems and ecological songs, responded to specific riddles, watched documentaries about the planet Earth, learned about the importance of waste recycling, and greens the green space of the kindergarten themselves. Throughout the school year, the theme centre of the group, enriched with materials from nature, has become the key point of contact of children with the elements of the environment - fruits, vegetables, domestic and wild animals in our country, poles, various species flowers, insects, etc. The children had the opportunity to closely observe and touch the exposed objects, to ask questions about them and thus to enrich their general culture. Also, at the living corner, we conducted two experiments on the corn and corn grains.

The children in the control group were not involved in ecological education projects.

a) Final stage

At this stage, the same samples were applied as at the pre-test stage, with the same test conditions being met.

3.3. Results of research. Analysis, processing and interpretation of the data obtained

Experimental group - Doctoral test (PRETEST)

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

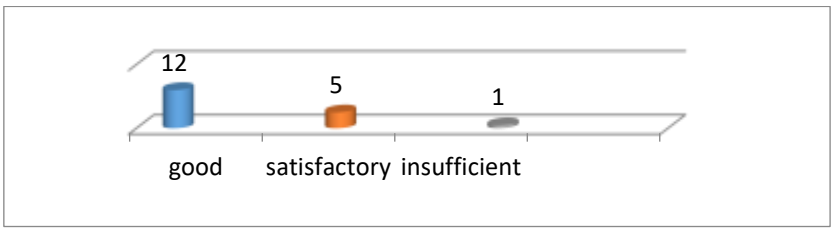

Figure 01. Control group - Doctoral test (PRETEST)

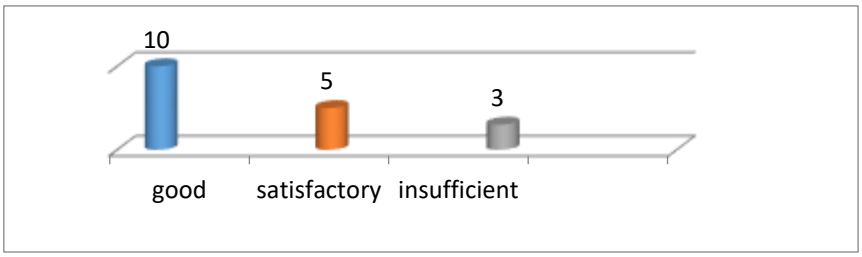

Figure 02. Experimental Group - Practical Test (PRETEST)

Both groups have only scored "Good", "Enough" and "Insufficient". We note that we do not have "Very Good" ratings, that the results are generally medium and weak in both groups.

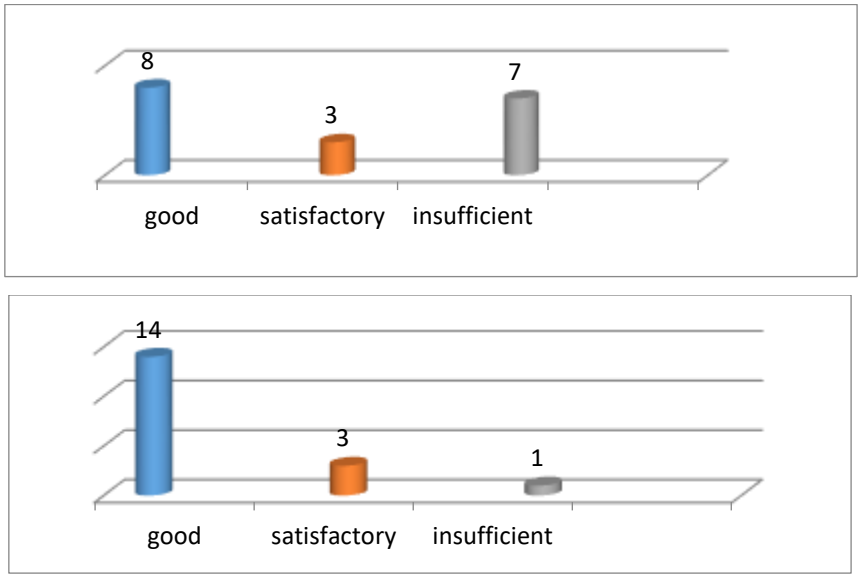

Figure 03. Control Group - Practice (PRETEST)

Preschools have generally been rated poor and very poor (Figure 01, Figure 02). Besides the fact that the observation of the elements of the environment is not well structured in the middle group, in addition, at the beginning of the large group, the ability to express through the drawing is not fully developed. Children hesitate very much when they are in the situation of drawing something. These factors have contributed to very low performance. The two groups of subjects, however, have comparable results to this test and have a similar level of development of analytical capacity (Figure 03):

- the test results for the two groups are distributed irregularly, covering several types of ratings (from very good to insufficient);

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

- the test results are both weak and very weak in both groups (experimental group - 10 sufficient and insufficient ratings, sufficient and insufficient qualifying group 12). The results obtained by pre-school children in the final phase

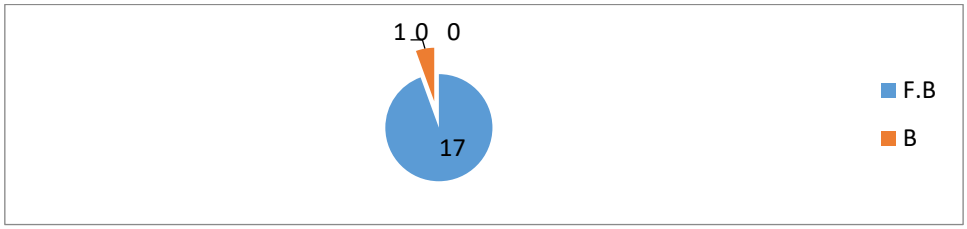

Figure 04. Experimental group - Doctoral test

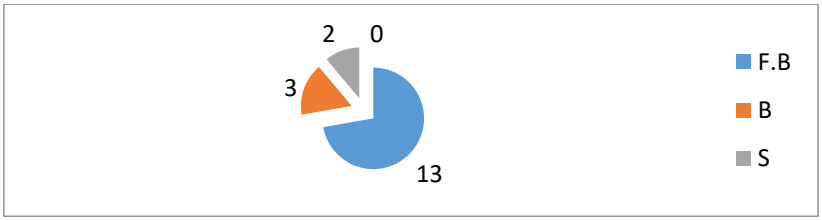

Figure 05. Control group - knowledge test

The progress of the control group from the pretest to the posttest is visible (Figure 04), which can be explained by some informal influences, but especially by the influence of the discipline, the knowledge of the environment, where the children were given some notions of ecology, information about the living and the nevi, about the cycle of plant and animal development, about the vital factors for survival. However, children in the control group have a limitation of purchases because they have hardly obtained "Very good" ratings (Figure 05). On the other hand, the experimental group has made a maximum leap, the evolution being due to the study of ecological education. Of the 18 subjects, 17 received the "Very Good" rating and one remained at the "Good" rating. We note that most of the subjects have evolved from lower grades to the "Very Good" rating.

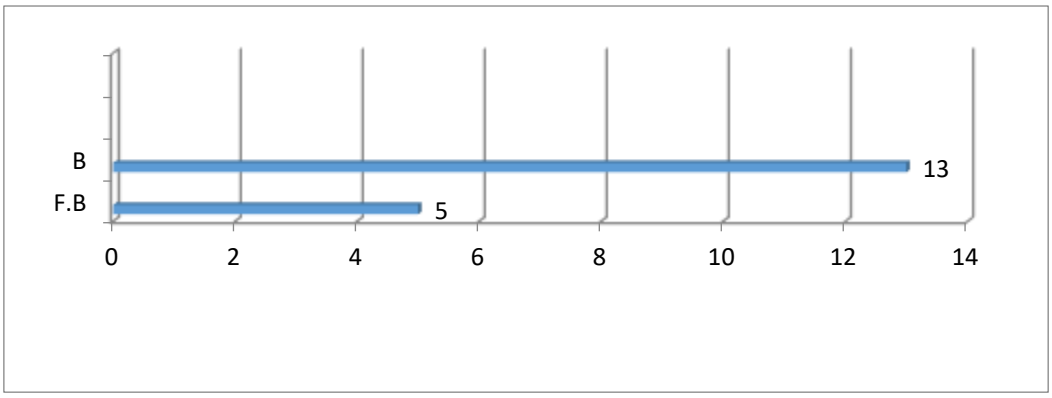

Figure 06. Experimental Group - Practical Field (POSTTEST).

https://doi.org/10.15405/epsbs.2019.08.03.274
Corresponding Author: Ileana Gurlui
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

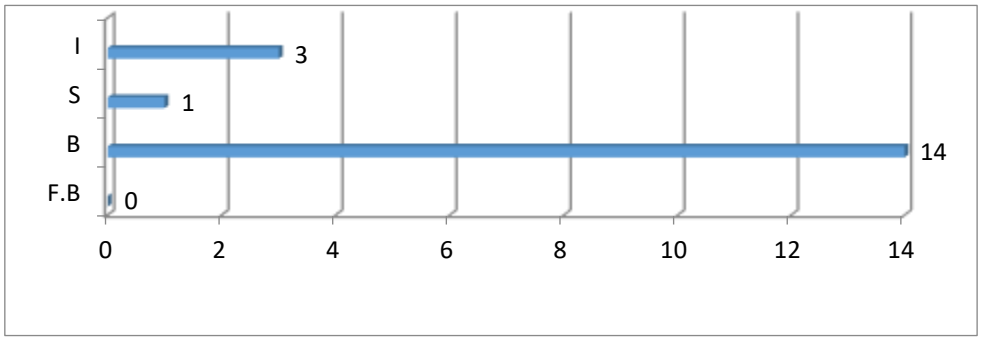

Figure 07. Control Group - Practice Field (POSTTEST)

The results of pre-school children in the experimental group are better than those of the children in the control group (Figure 06). Subjects in the first group had a much more frequent contact with animals and plants to observe them in various contexts, they also participated more often in conversations on their description, and they greatly broadened the general culture (Figure 07). DISTRIBUTION OF SUBJECTS 'RESULTS IN THE TWO PHASES OF TESTING. Ratings for the assessment test (Table 01).

Table 01a. Practical sample - drawing a drawing

GROUP	PHASE	F.B	B	S	I
EXPERIMENTAL	PRETEST	0	12	5	1
	POSTTEST	17	1	0	0
CONTROL	PRETEST	0	10	5	3
	POSTTEST	3	13	2	0

Table 01b. Practical sample - drawing a drawing

GROUP	PHASE	F.B	B	S	I
EXPERIMENTAL	PRETEST	0	8	3	7
	POSTTEST	5	13	0	0
CONTROL	PRETEST	1	5	2	10
	POSTTEST	0	14	1	3

Practical education and knowledge of the environment, included in the timetable of both groups, determined the progress of the children. The two groups, which started from similar levels of performance in this dependent variable, in the post-test phase are characterized by the appearance of an interesting change, the experimental group having a much better ability to elaborate, analyze. The changes we have made allow us to infer that subjects who have undergone ecological education have had a much richer background of living world representations, well consolidated due to repetitions, have been able to work with much more efficient criteria and algorithms to solve the given task of analysis.

7. Conclusion

This paper aims to present the ways in which it can be successfully implemented in the ecological education group, to illustrate various interactive ways to appeal and not least to highlight a number of

positive effects that the didactic premise that we started in the elaboration of this paper was that learning is not a simple process of knowledge storage but rather a complex activity, making it more effective and attractive when the child is engaged in an inter-human relationship. Therefore, all activities were carried out using interactive working methods, combined in a balanced way with traditional ones, whose staging suggested a permanent invitation to play and a focus on the child's universe. As a result of the pedagogical research carried out on the interactive ways of achieving ecological education, we came to the following conclusions: The psychic particularities allow from pre-school age to acquiring knowledge, skills, abilities, attitudes in the field of ecological education; The curriculum provides the possibility of achieving ecological education, but this depends on the educator, who needs to know how best it is for the group to whom he teaches to make it possible to teach these notions - optionally, within the thematic projects or infusion ecological messages at the level of classical disciplines; Preschools assimilate more and happily when they actually participate in the building of their own knowledge, being actively involved, only when they are simple information receivers. Knowledge is also transferable in contexts other than those in which it was acquired; Working in groups, gradually, children learn that those who think differently than they have as much reason and responsibility as themselves; Learning must naturally "grow" from what the child knows, in the direction of discovering the variety of nature and phenomena, in an experimental way. Effective learning will provide the child with the opportunity to experience, rediscover nature through direct contact with the child, where the role of the educator is both guide and collaborator; The development of critical thinking is a priority formative objective, which can be achieved by using mainly active-participatory strategies. However, these must not be broken by traditional strategies; The Optional instructs the children to enter the secrets of nature, to understand the relationships between phenomena, to educate their love for nature, the ability to protect and respect the environment, the desire to contribute to maintaining the balance that manifests in nature.

References

Bălăceanu. O., (2013). *Educaţia ecologică formală şi importanţa ei*, [*The Formal Ecological Education and its Importance*]. Bucureşti: Columna.

Burcu, A. & Burcu, A., (2005). *Educaţia ecologică, dezvoltarea durabilă şi calitatea vieţii, [The Ecological Education, the development and Quality of Life*], Cluj-Napoca: Mega.

Fodor, L., (1996). *Probleme actuale ale educaţiei ecologice [Actual Problems of the Ecological Education]*. Cluj-Napoca: Zilele Academice Clujene, 14–19 octombrie.

Geamănă, N., A., Dima, M. & Zainea, D., (2008). *Educaţia ecologică la vârsta preşcolară. Mic îndrumar pentru educatoare,* [The Ecological Education at pre-school children. Lessons for pre-school teachers]. Bucureşti: Arlequin.

Gurlui, I. (2014). *Activitati integrate in gradinita. Ghid metodic* [*Integrated Activities for kindergarten. Methodological Guide*], Pitesti: Carminis.

Ivănescu, M., (2007). Educaţie ecologică şi de protecţie a mediului. Caietul „Micii ecologişti" pentru învăţământ preşcolar nivelul II (5–6/7 ani) [*Ecological Education and the Protection of Environment. Little Ecologists notebook for pre-school children*].

Ordonanţa de urgenţă a Guvernului nr.195/2005 privind protecţia mediului, art.1 alin.2. [The Government Urgent Laws regarding the Environment].

Petre, D., Ivan, A. & Roman, E., (2006). *Proiecte tematice privind activităţile de educaţie ecologică în grădiniţa de copii.* [*Theme Projects regarding Ecological Activities at kindergarten*], Piteşti: Tiparg.

Tudor, S., (2015). *Educația la vârsta timpurie și școlară mică în contextul instruirii centrate pe competente*.[Education during pre-school in the context of teaching due to Competences], Craiova: Sitech.