

Teachers' attitudes towards the implementation and involvement in GREEN activities at pre-school level

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Abstract

Pre-school education is a crucial time in the formation of children's individual personalities and values. In the context of growing concerns about climate change and environmental sustainability, integrating GREEN education into the pre-school system is becoming an essential choice for preparing new generations for global environmental challenges. In this sense, the proposed research focuses on teachers' attitudes towards the implementation and involvement in GREEN activities at pre-school level. A key aspect of this research is to identify the underlying motivations behind the adoption of GREEN education in pre-school settings. Exploring these reasons will shed light not only on the theoretical and normative aspects that support the need for GREEN education, but also on the practical aspects related to the benefits observed in children's development in terms of environmental awareness, social responsibility and the formation of sustainable behaviours. The research will also focus on the level of teachers' interest in the application of GREEN education in the preschool learning process. Assessing this aspect will contribute to understanding the degree of teachers' receptiveness and willingness to integrate specific GREEN education themes and activities into the curriculum. The research will also explore ways of implementing GREEN education in the pre-school environment, highlighting effective practices and obstacles encountered by teachers in the process. This approach will provide useful information for the

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development of educational strategies and resources to facilitate the effective integration of GREEN themes into pre-school curricula.

Through this research, we will also investigate the level of knowledge teachers' knowledge about GREEN education, identifying possible gaps in their professional training in this field. The results will provide essential information for the development of in-service training programmes to support teachers in improving their skills in GREEN education. Therefore, the main objective of this research is to bring attention to teachers' attitudes towards implementing and engaging in GREEN activities at pre-school level, providing relevant and practical data for improving the quality of pre-school education and training future generations in sustainability.

Keywords: *research, green education, teacher's attitude, pre-school education*

Introduction

Environmental education is a new type of education that aims to develop environmentally responsible citizens. The main goal is "to raise human awareness of the ecosystem in which they work, to optimize the relationship between man and the surrounding nature" (Raica, 2016, Anghel & Neculau, 20). This type of education aims at a stable balance between the development of life skills and the delivery of certain knowledge, dressing everything in the form of practical activities. The concept of environmental education was developed to mitigate the negative effects of pollution on the environment.

Among the major concerns generated by global issues, the focus is now on developing GREEN skills (Anghel & Anghel, 2022). This suite of new skills for students to develop has emerged as a way of tackling the growing problems of climate change and environmental degradation. They play a crucial role in preparing individuals and society as a whole to face environmental challenges and contribute to building a more sustainable future. These skills can be developed through education, training and practical experience and should be promoted at individual, institutional and community level (Smith & Williams, 1998). To this end, the European Commission has developed the European Sustainability Competences Framework guide, which aims to provide a model of competence areas and sustainability competences to be developed, to guide education staff

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towards good use, to propose examples of good practice (Bianchi et al, 2022).

GREEN education is still in its infancy in Romania, not being regulated by law, but it takes various forms in pre-university education. This type of education focused on expanding knowledge about sustainability should be found in the pre-university system in the form of an innovative educational framework that emphasises experiential learning and the development of children's environmental awareness from an early age.

Educating children and developing GREEN skills should be developed early, starting in kindergarten. Although this type of education seems to be somewhere at the bottom of the list of concerns, it plays an important role. Among the many advantages we can identify are the development of feelings of affection towards everything that surrounds them, the correction of behavioural attitudes, the transmission of new knowledge and the clarification/correction of information they have from family, through television or fairy tales, the formation of future personalities (Nică, 2015). Another author reminds that there are also other formative values developed through the development of these types of activities: - involvement in solving environmental problems, development of ecological, responsible behaviour, development of the ability to make decisions, stimulating preschoolers' creativity, formation of attitudes that lead to initiatives, decisions and concrete actions on the environment (Solovjeva & Minakova, 2015). GREEN education in kindergarten plays a crucial role in training future generations to understand, respect and protect the environment. GREEN education, also known as ecological education or environmental education, is an educational approach that focuses on learning about and understanding environmental issues and promoting environmentally friendly behaviour and practices. The main aim of GREEN education is to develop environmental awareness and responsibility among individuals, including pre-school children, to help protect and conserve the environment.

The most important facilitator in the development of these types of skills is, in relation to the age of the children, the teacher who has the optimal tools, methods and opportunities to achieve this goal.

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Stoica (2020) points out that among the most common methods available to the teacher are the personal example directly and permanently observed by the preschoolers, scientific experience and experimentation (Stoica, 2020). In other words, pre-schoolers understand what they have to do when they see and understand the cause-effect relationship. Children learn to be responsible for their actions, including how they consume resources and their impact on the environment. This education teaches them to reduce, reuse and recycle, as well as save energy and water. Through hands-on activities, such as planting and tending gardens or collecting recyclable waste, children learn that every action counts in the effort to protect the planet.

Since environmental education is not high on the family's list of priorities, it remains a problem for the education system. From this point of view, the teacher must be the role model. The theory of learning by imitation, proposed by psychologist Albert Bandura, stresses that people learn new behaviours and skills by observing and imitating others around them. The process of learning by imitation begins with observation of a model, in this case the teacher, which can be a person or other agent performing a specific behaviour or action. Observation is a key component of this process as the individual needs to pay attention to what is happening around them in order to learn without distortion (Drămnescu, 2010). However, if a teacher does not have a positive attitude towards the promotion of ecology and remains indifferent or impartial, limitations can form in the formation and development of GREEN skills.

GREEN education at pre-school level can be easily implemented by integrating GREEN activities into the pre-school curriculum. Promoting these types of activities contributes to the development of future environmentally responsible citizens. Involving pre-school children in greening activities contributes to building life skills. In this way, pre-school children can explore and discover essential information about ecology at an early age, increasing the likelihood that they will act responsibly in the future. These activities aim to raise awareness of the disastrous consequences of the imbalance between the environment and development, irrational industrialisation which has the effect of polluting and even destroying

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nature, the appearance of diseases caused by the degradation of the natural environment of existence: (air, water, soil pollution) (Dume, 2022, p. 17 apud Cucos, 2002).

A key element of green education in kindergarten is outdoor learning. At pre-school age, children learn mostly through sensory and affective calming. A quick way to get children learning about the environment is to put them in touch with it. By carrying out activities in nature, children have the opportunity to experience first-hand their connection to their environment. This experience can stimulate their natural curiosity and teaches them to appreciate the beauty of nature. Children can observe plants, animals and the natural cycles of the environment, which develops a deep ecological awareness. Pupils' creativity and concrete thinking can generate brilliant ideas for protecting the environment, which is why they should get in touch with them: "Through observations in nature, children assess the health of the environment and find measures to protect it. They form positive, corrective attitudes towards the degraded environment and express their desire to take direct action by engaging in actions to care for and keep clean the kindergarten, at home and in the street (they will pick up papers thrown in front of the kindergarten, take care of the playground near the kindergarten)" (Nică, 2015, p. 2).

GREEN education in kindergarten also places a strong emphasis on developing critical thinking and research skills. Through environmental experiments and projects, children are encouraged to ask questions, investigate and find solutions to environmental problems (Smith & Williams, 1999). This active approach develops their problem-solving skills and teaches them to engage in making informed decisions to address environmental challenges.

Another important aspect of environmental education in kindergarten is promoting respect for natural and cultural diversity. Children learn to appreciate the diversity of species, cultures and perspectives, which develops a tolerant and open attitude towards the world around them (Litvishko et al, 2020). This understanding of diversity is essential for building a more harmonious and sustainable society.

In conclusion, GREEN education in kindergarten is a complex and holistic process aimed at the harmonious development of children

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in the context of a changing world. By learning in nature, promoting responsibility, developing critical thinking and respect for diversity, this form of education prepares children to become responsible and environmentally aware citizens. Green education in kindergarten not only shapes future generations capable of protecting and caring for the environment, but also gives them the tools to build a better and more sustainable world.

Research methodology

Purpose of research

The aim of the present research is to investigate the attitude and identify the level of knowledge of teachers towards the implementation of GREEN activities. This research is a mixed quantitative and qualitative research.

Materials and methods

In order to achieve the objectives and validate the proposed hypotheses, two research tools were used in the research: questionnaire and focus group.

The questionnaire consists of 11 items and is addressed to pre-school teachers. It consists of two types of items: 3 open-ended and 8 closed-ended, which aim to find out teachers' interest in GREEN activities, their level of preparation and the degree of implementation of their activities. The estimated time for completion is 10 minutes.

A focus group is a research tool conducted through in-depth interviews that can uncover participants' behaviours and attitudes. This method provides less specific but more useful information about how people think and interact (Anghel, 2017). A focus group is a discussion group of 6 to 12 people led by a moderator. Discussions are based on specific topics that are clearly defined before the group meets.

Focus group research can be carried out before quantitative research. Understanding behavioural trends facilitates the creation of questionnaires for quantitative research. The benefits of focus groups are: possibility to generate large amounts of information on a given topic, detailed expression of opinions and attitudes, low costs, possibility to know what the target audience really thinks, ideas and interests that have not been considered before. However, this method

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also has some disadvantages: the results are not representative of everyone in the group, the number of questions is limited and it is not possible to attribute an individual's opinion to the majority.

Objective

The following objectives were set in the research:

O1 - Identify the level of interest of teachers in GREEN activities and to implement them in pre-school groups.

O2 - Identify the current level of knowledge that pre-school teachers have in GREEN education to identify gaps in preparation.

O3 - Identify the degree of implementation of GREEN activities in pre-schools by highlighting effective practices and strategies.

Hypotheses

H1: It is assumed that the level of knowledge about ecology and environmental education influences teachers' attitudes towards GREEN activities.

H2: It is assumed that those teachers who have a positive attitude towards GREEN activities implement more of these activities in the preschool group.

H3: It is assumed that those teachers who have a higher level of knowledge in the field of GREEN education implement to a greater extent this type of activities in the preschool group.

H4: It is assumed that those teachers who have resources and institutional support implement this type of activities to a greater extent in the preschool group.

Sample

The present research was conducted on a group of 40 pre-school teachers, $M=3.15$, $AS=1.05$ (Table 2). The teachers participating in the study were divided into four age categories as follows: 18 - 25 years (5 respondents - 12.50%), 26 - 33 years (4 respondents - 10%), 34 - 41 years (11 respondents - 27.50%) and over 41 years (20 respondents - 50%).

Table 1. *Frequency of respondents by age*

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		Frequency	Percent	Valid percentage	Cumulative percentage
Valid	1	5	12,5	12,5	12,5
	2	4	10,0	10,0	22,5
	3	11	27,5	27,5	50,0
	4	20	50,0	50,0	100,0
	Total	40	100,0	100,0	

Table 2. *Statistical description of the group of subjects according to their age*

Gen		
N	Valid	40
	Missing	0
Mean		3,15
Std. Error of Mean		,17
Median		3,50
Mode		4
Std. Deviation		1,05
Variance		1,11
Range		3
Minimum		1
Maximum		4
Sum		126

Out of a total of 40 respondents (Table 3, Table 4), 40 females (100%) participated in the study, M=1, AS=.00.

Table 3. *Frequency of respondents by gender*

		Frequency	Percent	Valid percentage	Cumulative percentage
Valid	1	40	100,0	100,0	100,0

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Table 4. *Statistical description of the group of subjects according to gender*

Sex:		
N	Valid	40
	Missing	0
Mean		1,00
Std. Error of Mean		,000
Median		1,00
Mode		1
Std. Deviation		,000
Variance		,000
Range		0
Minimum		1
Maximum		1
Sum		40

In terms of educational level, 4 teachers have a secondary education (10%), 17 have completed a first cycle bachelor's degree (42.5%) and 18 have completed a master's degree (45%), and one has completed doctoral studies (2.5%) (Figure 3), $M=2.40$, $AS=.71$ (Table 5, Table 6).

Table 5. *Frequency of respondents by level of education*

		Frequency	Percent	Valid percentage	Cumulative percentage
Valid	1	4	10,0	10,0	10,0
	2	17	42,5	42,5	52,5
	3	18	45,0	45,0	97,5
	4	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Table 6. *Statistical description of the group of subjects according to level of education*

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Education level:		
N	Valid	40
	Missing	0
Mean		2,40
Std. Error of Mean		,112
Median		2,00
Mode		3
Std. Deviation		,709
Variance		,503
Range		3
Minimum		1
Maximum		4
Sum		96

According to the level of professional training, the responding teachers have so far obtained the following teaching degrees: 6 beginners (15%), 7 with a final degree (17.5%), 7 with a teaching degree II (17.5%) and 20 with a teaching degree I or equivalence with a PhD (50%), $M=3.03$, $AS=1.14$.

Table 7. *Frequency of respondents by level of education*

		Frequency	Percent	Valid percentage	Cumulative percentage
Valid	1	6	15,0	15,0	15,0
	2	7	17,5	17,5	32,5
	3	7	17,5	17,5	50,0
	4	20	50,0	50,0	100,0
	Total	40	100,0	100,0	

Table 8. *Statistical description of the group of subjects according to level of education*

Didactic grade:		
N	Valid	40
	Missing	0

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Mean	3,03
Std. Error of Mean	,181
Median	3,50
Mode	4
Std. Deviation	1,143
Variance	1,307
Range	3
Minimum	1
Maximum	4
Sum	121

The teachers investigated work in educational establishments located in both urban and rural areas: 25 teachers work in urban areas (62.5%) and 15 teachers work in rural areas (37.5%), M=1.38, AS=.49

Table 9. *Frequency of respondents by level of education*

		Frequency	Percent	Valid percentage	Cumulative percentage
Valid	1	25	62,5	62,5	62,5
	2	15	37,5	37,5	100,0
	Total	40	100,0	100,0	

Table 10. *Statistical description of the group of subjects according to level of education*

The school where you teach belongs to the environment:		
N	Valid	40
	Missing	0
Mean		1,38
Std. Error of Mean		,078
Median		1,00
Mode		1
Std. Deviation		,490
Variance		,240
Range		1

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Minimum	1
Maximum	2
Sum	55

Results

SPSS 26 was used to interpret and analyse the data obtained from the two instruments.

In order to observe the attitudes that pre-school teachers tend to have when it comes to implementing and engaging in GREEN activities, a questionnaire consisting of 11 items (8 open-ended questions and 3 described questions) was administered. The research group has the following characteristics:

Table 11. *Statistical description of questionnaire results*

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
N Valid	40	40	40	40	40	40	40	40	40	40	40
Missing	0	0	0	0	0	0	0	0	0	0	0
Mean	2,65		2,15	2,60	1,65	4,03	3,48		3,28	2,78	
Std. Error of Mean	,181		,141	,086	,132	,104	,193		,168	,162	
Median	2,00		2,00	3,00	1,00	4,00	4,00		3,50	3,00	
Mode	2		2	3	1	4	4		4	3	
Std. Deviation	1,145		,893	,545	,834	,660	1,219		1,062	1,025	
Variance	1,310		,797	,297	,695	,435	1,487		1,128	1,051	
Range	3		3	2	2	3	4		4	3	
Minimum	2		1	1	1	2	1		1	1	
Maximum	5		4	3	3	5	5		5	4	
Sum	106		86	104	66	161	139		131	111	

For the first item, "What is the way in which you have been informed and trained about GREEN education?", the subjects answered as follows: 28 answered "Internet" (70%), 5 answered "Colleagues" (12.5%), and 7 answered "Not informed" (17.5%).

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Table 11. *Statistical description of the results of the questionnaire - item 1*

How have you been informed and trained about GREEN education?		
N	Valid	40
	Missing	0
Mean		2,65
Std. Error of Mean		,181
Median		2,00
Mode		2
Std. Deviation		1,145
Variance		1,310
Range		3
Minimum		2
Maximum		5
Sum		106

For the second item, "What does GREEN education mean to you in a pre-school context?", the subjects responded as follows:

1. Lack of Knowledge: 5% of respondents indicated a lack of knowledge or lack of clarity about GREEN education.
2. Green Education: 25% described GREEN education as being associated with environmental education or ecology.
3. Responsible Behaviour: 2.5% stressed the importance of responsible behaviour towards the environment.
4. Out-door activities: 75% were practical environmental activities with pre-schoolers.
5. Sustainable Practices: 2.5% mentioned sustainable education or sustainable practices.

For the third item, "How do you rate your level of knowledge about GREEN education concepts and methods?", the subjects answered as follows: 9 answered "Poor" (22.5%), 20 answered "Moderate" (50%), 7 answered "Good" (17.5%), and 4 answered "Very good" (10%).

Table 12. *Statistical description of the results of the questionnaire - item 3*

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How do you assess your level of knowledge about GREEN education concepts and methods?

N	Valid	40
	Missing	0
Mean		2,15
Std. Error of Mean		,141
Median		2,00
Mode		2
Std. Deviation		,893
Variance		,797
Range		3
Minimum		1
Maximum		4
Sum		86

For the fourth item, "Have you participated in training or training courses on the implementation of GREEN education?", the subjects answered as follows: one person answered "Yes" (2.5%), 14 answered "No" (35%), and 25 answered "No, but I would like to participate" (62.5%).

Table 13. *Statistical description of the results of the questionnaire - item 4*

Have you attended training or training courses on implementing GREEN education?		
N	Valid	40
	Missing	0
Mean		2,60
Std. Error of Mean		,086
Median		3,00
Mode		3
Std. Deviation		,545
Variance		,297
Range		2

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Minimum	1
Maximum	3
Sum	104

For the fifth item, "From which group do you think GREEN activities can be implemented in order to build environmental skills in pre-school children?", the subjects answered as follows: 23 answered "Small group" (57.5%), 8 answered "Medium group" (20%), and 9 answered "Large group" (22.5%).

Table 14. *Statistical description of the results of the questionnaire - item 5*

From which age group do you think GREEN activities can be implemented in order to build environmental skills in pre-school children?		
N	Valid	40
	Missing	0
Mean		1,65
Std. Error of Mean		,132
Median		1,00
Mode		1
Std. Deviation		,834
Variance		,695
Range		2
Minimum		1
Maximum		3
Sum		66

For the sixth item, "To what extent do you consider it necessary to implement GREEN activities in pre-school education?", the subjects answered as follows: one person answered "To a very small extent" (2.5%), 5 answered "To a medium extent" (12.5%), 26 answered "To a large extent" (65%), and 8 answered "To a very large extent" (20%).

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Table 14. *Statistical description of the results of the questionnaire - item 6*

To what extent do you consider it necessary to implement GREEN activities in pre-school education?		
N	Valid	40
	Missing	0
Mean		4,03
Std. Error of Mean		,104
Median		4,00
Mode		4
Std. Deviation		,660
Variance		,435
Range		3
Minimum		2
Maximum		5
Sum		161

For the seventh item, "How do you think a positive attitude towards GREEN education could be encouraged and supported among teachers?", the subjects responded as follows:

1. Education and Training: 47.5% of respondents suggested education and training (such as courses) as the main ways of encouragement and support.
2. Personal Responsibility: 2.5% emphasized the personal responsibility of teachers in encouraging GREEN education.
3. Partnerships: 45% mentioned participation in mobilities, partnerships and workshops as useful.
4. Information Resources: 5% suggested providing information materials as a method of encouragement.

For the eighth item, "How do you rate your level of interest in GREEN educational activities?", subjects responded as follows: 2 responded "Very low" (5%), 11 responded "Low" (11%), 20 responded "High" (50%), and 7 responded "Very high" (17.5%)

Table 15. *Statistical description of the results of the questionnaire - item 8*

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How do you rate your level of interest in GREEN educational activities?

N	Valid	40
	Missing	0
Mean		3,48
Std. Error of Mean		,193
Median		4,00
Mode		4
Std. Deviation		1,219
Variance		1,487
Range		4
Minimum		1
Maximum		5
Sum		139

For the ninth item, "In the kindergarten where you work, to what extent is there interest in implementing GREEN education?", the subjects answered as follows: 3 answered "No interest" (7.5%), 6 answered "Very little" (15%), 11 answered "A little" (27.5%), 17 answered "Medium" (42.5%), and 3 answered "A lot" (7.5%).

Table 16. *Statistical description of the results of the questionnaire - item 9*

At the level of the kindergarten where you work, to what extent is there interest in implementing GREEN education?

N	Valid	40
	Missing	0
Mean		3,28
Std. Error of Mean		,168
Median		3,50
Mode		4
Std. Deviation		1,062
Variance		1,128
Range		4
Minimum		1

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Maximum	5
Sum	131

For the tenth item, "Specify the frequency of the implementation of GREEN activities in the group of preschoolers in which you are a teacher", the subjects answered as follows: 6 answered "Daily" (15%), 8 answered "Weekly" (20%), 15 answered "Monthly" (37.5%), and 11 answered "Occasionally" (27.5%).

Table 17. *Statistical description of the results of the questionnaire - item 10*

Specify the frequency of the implementation of GREEN activities in the group of preschool children you teach.		
N	Valid	40
	Missing	0
Mean		2,78
Std. Error of Mean		,162
Median		3,00
Mode		3
Std. Deviation		1,025
Variance		1,051
Range		3
Minimum		1
Maximum		4
Sum		111

For the last item, "What are the main reasons why you think GREEN education should be implemented in early childhood education?

", the subjects responded as follows:

1. Application of Knowledge: 5% of respondents stressed the importance of applying the knowledge learned in class, emphasising the need for practical education.
2. Behaviour formation: 27.5% highlighted GREEN education as a means to form responsible behaviours and values from an early age.

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3. Environmental Awareness: 40% mentioned the importance of environmental awareness and environmental issues, suggesting an understanding of the importance of environmental education for children.

4. Importance of Early Education: 27.5% stressed the importance of GREEN education in the early stages of child development.

Eight teachers participated in the focus group. The selected group has the following characteristics: teachers with teaching experience, at least grade II, knowledgeable in the field of environmental education. Following the focus group, the participants provided various answers indicating strategies for implementing GREEN education in pre-school education.

To the question *"In which teaching contexts would you adopt strategies that integrate GREEN education?"* The majority of teachers said that they prefer to integrate GREEN education into a wide range of activities, from science lessons to art projects, demonstrating an interdisciplinary and transdisciplinary approach: "We have adopted strategies that integrate GREEN education in the framework of Green Week, involving outdoor activities."

Analysing the answers given to the question "What types of GREEN activities do you do most often?" most teachers answered that they most often do recycling and gardening activities. "We have carried out Green Week, eco costume parade, waste collection activities, flower planting. As regards the answers to the question "How did the GREEN activities in the classroom influence the children's behaviour?", it showed an awareness among pre-schoolers of the importance of protecting the environment. Preschoolers have become more responsible in terms of protecting the environment, throwing waste in special places, protecting plants."

When asked to describe ways in which they can continually develop GREEN activities, teachers talked about educational partnerships, green contests, visits, outdoor activities, and working with experts in the field, "To continually develop GREEN activities, I focused on participating in workshops, visits to the botanical garden, the recycling center, activities with an expert in the field.

Teachers' attitudes towards the implementation and involvement in GREEN activities at pre-school level

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Analysing the answers given to the question "What teaching aids would help you most in achieving your objectives when carrying out GREEN activities?" most teachers said that educational software, gardening kits, nature materials, audio-visual materials, models are useful. "In carrying out GREEN activities it would help me to be able to access different educational platforms, models, nature materials, audio-video materials.

When asked "What difficulties have you encountered in carrying out GREEN activities?", teachers mentioned difficulties such as low budget, insufficient materials, lack of support from the community, "In carrying out GREEN activities we have had difficulties such as insufficient financial resources and low interest from the community.

Conclusions

GREEN activities are carried out in limited numbers, teachers do not have enough information on GREEN education, and they tend to ask for training. However, teachers show an increased interest in this type of education. Although they do not yet have enough information on the subject, they tend to know some aspects of GREEN education. As the structure of the school year is built up, each educational institution carries out green activities during Green Week. Therefore, each pre-school succeeds to some extent in carrying out activities that promote the development of GREEN competences. Some pre-schools manage to carry out GREEN activities more often. This is an important reason why teachers should receive training in this area. Based on the information collected in the working group, we find that among the methods used by teachers in this type of activities are active-participatory methods, computer-assisted instruction, collaborative learning, case studies, practical workshops, educational games, materials from nature. The most commonly used teaching aids are educational software, gardening kits, nature materials, audio-visual materials, models, and the contexts of application are varied.

Finally, we conclude that there is a growing interest in the GREEN activities that are being implemented in early childhood education.

References

Anghel, G. A. (2017). *Elemente de metodologie a cercetării în educație*. București: Editura Didactică și Pedagogică.

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- Anghel GA, Anghel MA. Green Entrepreneurship among Students—Social and Behavioral Motivation. *Sustainability* (2022), 14(14):8730. <https://doi.org/10.3390/su14148730>
- Anghel, G. A., & Neculau, B. C. (2022). Quality education as a predictor of education for sustainability. *Journal of Education, Society & Multiculturalism*, 3(1), 132-141. <https://doi.org/10.2478/jesm-2022-0008>
- Bianchi, G., Pisiotis, U., & Cabrera, M. (2022). GreenComp. The European Sustainability Competence Framework. <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>
- Drămnescu, A. M. (2010). Teoria socială a învățării a lui Albert Bandura. Implicații în construirea modelelor pedagogice. *Studia Universitatis Moldaviae (Seria Științe ale Educației)*, 39(9), 47-52.
- Litvishko, V., Akhmetova, A., Kodashova, G., Zhussupova, A., Malikova, R., & Kuralova, A. (2020). Formation of ecological education of the population. In *E3S Web of Conferences* (Vol. 159, p. 01009). EDP Sciences.
- Nică, D (2015). Observările în natură și educația ecologică în grădiniță. În *Convorbiri didactice*. Tulcea: Casa Corpului Didactic, nr. 8. p. 1-3.
- Raica, M. (2016). Educația ecologică - Componentă a ”noilor educații”. *Pangeea*, 16(16), 124-127.
- Solovjeva, T. P., & Minakova, L. Y. (2015). Implementation of ecological education in a higher school. *Procedia-Social and Behavioral Sciences*, 200, 453-459.
- Smith, G. A., & Williams, D. R. (Eds.). (1998). *Ecological education in action: On weaving education, culture, and the environment*. State University of New York Press.
- Smith, G. A., & Williams, D. R. (1999). Ecological education: Extending the definition of environmental education. *Australian Journal of Environmental Education*, 15, 139-146.
- Stoica, B. G. (2020). Forme și metode ale educației ecologice la nivelul educației timpurii. În *Calitate în educație-imperativ al societății contemporane* (Vol. 1, pp. 335-338).