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# The Impact of Environmental Education on Sustainable Development, Environmental Consciousness and Pro-environmental Behaviour

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## Abstract

**Purpose** – The primary aim of this quantitative survey research is to explore the connection between environmental education, participation in environmental programs or actions, and the enhancement of pro-environmental attitudes and behaviors in individuals. In light of global challenges such as climate change, biodiversity loss, and environmental degradation, understanding how education and active engagement can promote sustainability is

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increasingly crucial. This study aims to determine whether exposure to environmental education and participation in environmental actions can influence individuals' environmental consciousness and encourage more sustainable practices.

**Design/Methodology/Approach** – The study sample consisted of 2,687 Greek consumers, aged 18 to 29 years. This age group was specifically chosen to capture insights from young adults, who are key to future sustainability efforts. The Mann-Whitney non-parametric test was used to analyze potential differences in environmental awareness among participants who had received environmental education and those who had participated in environmental programs. The survey gathered responses related to specific actions, daily habits, and individual choices to assess the level of environmental consciousness among the participants. The research method focused on determining how environmental education and participation in programs impacted behaviors related to sustainability.

**Findings** – The findings of this survey indicate that individuals who received environmental education in school are more likely to consider the environmental consequences of their purchasing decisions. Furthermore, those who have participated in environmental programs or actions were more inclined to adopt pro-environmental behaviors, such as reducing waste, conserving energy, and opting for sustainable products. Additionally, the analysis revealed that participants aged 26–29 demonstrated higher environmental consciousness than their younger counterparts aged 18–21, suggesting that environmental awareness increases with age and experience.

**Originality** – This study contributes to the body of research on environmental education and sustainability by highlighting the significant role that both education and active participation in environmental initiatives play in fostering environmental awareness. It emphasizes the importance of these factors in encouraging sustainable behaviors and helping create a more sustainable and eco-conscious society.

**Design/Methodology/Approach** – The sample involved 2,687 Greek consumers aged 18 to 29 years. The non-parametric Mann-Whitney test was used to explore possible differences in the environmental consciousness of the research participants in relation to whether they have been taught environmental education at school and/or they have participated in an environmental program or action in the past. The survey participants were asked to respond regarding the frequency of specific actions and daily habits, which

frame their environmental consciousness and awareness. The questionnaire included behaviors such as recycling, reducing water and energy use, and choosing eco-friendly products. A multiple linear regression analysis was also conducted to assess the effect of age and other factors on environmental attitudes and actions.

**Findings** – The results of this survey showed that the people who have been taught about environmental education at school are more likely to consider the environmental impact of the products they buy, while those who have participated in environmental programs or actions adopt more consistent pro-environmental behaviors. These include limiting single-use plastics and supporting sustainability-related initiatives. Furthermore, through the multiple linear regression analysis, it was found that the participants aged 26–29 have an increased environmental consciousness compared to the participants aged 18–21, possibly due to increased maturity, life experience, and exposure to sustainability-related information.

**Originality** – This survey adds to the existing literature on environmental education and sustainability by highlighting the importance of environmental education and participation in environmental programs or actions towards increasing environmental consciousness and awareness and building a sustainable society. It underscores the necessity of incorporating structured environmental education within formal curricula and promoting active participation through community-based programs.

**Keywords:** Environmental education, educational environmental programs, pro-environmental behavior, environmental consciousness, sustainability, youth engagement.

## **1 Introduction**

Human societies, throughout the world, face challenges such as climate change, biodiversity loss, pollution and resource depletion, making environmental education and awareness imperative (Arora et al., 2018). In this context, environmental education serves as a powerful tool to promote a deeper understanding of the interconnections between humans and the natural world and to inspire actions (Chen 2016; Taylor, 2016, Salem et al., 2023), aiming on the one hand at a harmonious coexistence between humanity and the planet and on the other hand at creating a sustainable future for the next generations (Chen 2016; Taylor, 2016, Salem et al., 2023).

Environmental education includes a wide range of learning experiences aimed at increasing people's knowledge, skills, values and attitudes towards the environment (Kalfati et al., 2023). It is not restricted to formal classroom spaces, but extends to informal learning environments, community initiatives and experiential actions in nature (Kalfati et al., 2023). Through the integration of principles from various disciplines such as ecology, biology, sociology, economics and ethics, environmental education offers an holistic approach to understanding the complex web of ecological dimensions and environmental issues (Fortuin et al., 2011 ). At its core, environmental education seeks to promote environmental literacy – the ability to understand environmental concepts, evaluate environmental issues, and take documented decisions that contribute to sustainability (Saito, 2013). Through hands-on experiential experiences, critical thinking exercises, and interdisciplinary studies, environmental education empowers individuals, to become responsible stewards of the Earth, understanding the impact of human actions on the environment and mitigation and adaptation strategies to environmental change, and thereby recognizing their responsibility towards the planet and future generations (Ketlohilwe, 2019).

One of the fundamental goals of environmental education is to raise awareness of pressing environmental challenges and their interconnection with social, economic and political factors (Chawla & Cushing, 2007). Climate change, for example, is not just an environmental issue, but a complex phenomenon with far-reaching implications for human societies and ecosystems worldwide. By educating individuals about the causes, effects and possible solutions to climate change, environmental education fosters a sense of urgency and collective responsibility to address this global crisis (Boca & Saraçlı, 2019; Salequzzaman et al., 2001).

Environmental education promotes sustainable lifestyles and consumption patterns that minimize environmental impact and promote social equity (Joseph et al., 2019). By raising awareness of the environmental and social consequences of consumerism and overconsumption, environmental education encourages individuals to adopt more sustainable behaviours such as waste reduction, energy storage and supporting local and organic products (Omoogun et al., 2016). Individuals are therefore encouraged to make more conscious choices that minimize their environmental impact, prioritizing environmental and social concerns and contributing to the transition to a more sustainable and just society.

Furthermore, environmental education plays a critical role in creating a sense of environmental ethics and values (Kamran et al., 2023). By exploring

ethical dilemmas related to environmental issues such as environmental justice, biodiversity conservation, and animal welfare, individuals develop a deeper appreciation for nature's intrinsic value and the moral imperative to protect it (Kopnina, 2016). Environmental education encourages empathy towards other species and ecosystems and promotes a sense of interconnectedness and interdependence with all living beings.

In addition to promoting individual action, environmental education also seeks to inspire collective efforts to preserve and protect the environment. Through community projects, environmental campaigns and movements, individuals can mobilize their communities to address local environmental issues and advocate for policy changes at regional, national and international levels (Rootes, 2013). By encouraging cooperation and citizen participation, environmental education empowers communities to become catalysts for positive change, aimed at achieving environmental sustainability and social justice (Rootes, 2013).

Furthermore, environmental education promotes a deeper understanding of the cultural dimensions of environmental issues (Nordström, 2008). Indigenous knowledge systems, traditional ecological practices and cultural beliefs about nature are integral components of environmental education curricula. By recognizing the different ways in which different cultures perceive and interact with the environment, environmental education promotes cultural sensitivity and fosters dialogue and cooperation across cultural boundaries (Nordström, 2008).

At the same time, environmental education recognizes the importance of promoting a connection with nature among individuals, especially in urbanized societies where people are increasingly disconnected from the natural world (Öllerer, 2015). By providing opportunities for outdoor experiences, wilderness expeditions, and nature-based actions, environmental education helps individuals develop a sense of wonder, appreciation, and respect for the natural world (Öllerer, 2015). This connection with nature not only enhances individual well-being, but also fosters a sense of responsibility to protect and preserve natural ecosystems.

Finally, environmental education plays a key-role in promoting economic development that is environmentally sustainable and socially inclusive (Garcia et al., 2017). By raising awareness of the economic benefits of adopting sustainable practices such as energy efficiency, waste reduction and green technologies, environmental education, encourages businesses, industries and governments to adopt more sustainable business models and policies (Garcia et al., 2017). In this context, environmental education promotes

entrepreneurship and innovation in areas, such as renewable energy, sustainable agriculture and ecotourism, boosting economic growth while protecting natural resources and ecosystems.

In conclusion, environmental education is a powerful tool for promoting sustainability, promoting environmental literacy and inspiring collective action to create a more fair and sustainable future. By educating individuals about the interconnectedness of human societies and the natural world, environmental education empowers individuals to become informed and engaged citizens, who can make meaningful contributions to addressing global environmental challenges. As we navigate the complexity of the 21st century, environmental education acts as a beacon of hope, guiding us to a more harmonious relationship with the Earth and all its inhabitants.

In the context of a deeper understanding of the connection between environmental education and pro-environmental behaviour, the aim of this research is to identify, whether environmental education and participation in environmental programs or activities, enhance the pro-environmental attitude and behaviour of individuals.

## **2 Literature Review and Hypothesis Development**

There is an abundance of research work (López-Mosquera et al., 2015; Ortega-Egea et al., 2014; Sun et al., 2020; Xiao et al., 2013; Zen et al., 2014), documenting the connection of high education level with a more complete understanding of the environmental issues that concern the global community and therefore with the adoption of pro-environmental behaviours and actions, such as mitigating climate change, reducing greenhouse gases, recycling, sustainable consumption, etc. People with a higher level of education are more likely to be aware of the scientific and socio-economic aspects of environmental problems such as climate change, pollution and biodiversity loss (Masud et al., 2017) as they have more access to information and resources on environmental issues through academic institutions, professional networks and digital platforms (Varela - Candamio et al., 2018). At the same time, educational curricula at higher education level, often include content on sustainability and sustainable development (O'Byrne et al., 2015). In addition, higher education develops critical thinking and problem-solving skills, enabling individuals to understand complex environmental issues and critically evaluate information from multiple sources (Belluigi et al., 2017). Individuals with a higher level of education tend to have stronger pro-environmental attitudes and behaviours recognizing the importance of

environmental protection to achieve sustainability and supporting policies aimed at addressing environmental challenges (Sánchez et al., 2016). For example, people with a higher level of education, are more likely to engage in recycling, bioavailability efforts, and sustainable consumption practices (Corrado et al., 2022; Malik et al., 2023; Patel et al., 2017). Finally, people with a higher educational level participate to a greater extent in environmental organizations defending environmental policies and in environmental initiatives at the local level (Dresner et al., 2015).

According to Pluess (2015) the understanding of the value and effective application of environmental education is reflected in the creation of positive environmental attitudes of citizens (Wolters, 2014) and in making decisions to address environmental issues (Vicente-Molina et al., 2013) and, ultimately, in their resolution, with the view of improving environmental quality (Kang & Moon, 2014). In the broader context, the fact that environmental education taught citizens not only how to live in the environment (Pienaar et al., 2015; Siew et al., 2015), but also the value of environmental ethics (Feng et al., 2014), was put by Liu & Guo (2018) as a research hypothesis that there is a connection between the environmental education a person has been taught and the adoption of behaviours beneficial to the environment. The results of their research, on a sample of 288 students of the Central University of Finance and Economics in China, showed that there is a positive correlation between environmental education, environmental knowledge and environmental consciousness, as reflected in the daily habits and actions of individuals. The aforementioned positive correlation was also found in the research work of Li (2018), which sampled 287 students in 6 different departments of Minzu University, China, emphasizing that the goal of environmentally ethical attitude is based on environmental awareness and consciousness, as it is shaped by environmental education. Contrary to previous findings, Osunji (2021), with a sample of 400 secondary school students from 16 secondary schools in Nigeria, concluded that their non-environmental behaviour was due to insufficient knowledge of environmental problems and the effects of such behaviour.

Zsóka et al. (2013), using a sample of 2,496 students, aged 18–24, from 70 universities in Hungary, showed that there is a strong positive correlation between the intensity of environmental education and environmental knowledge. This is due both to environmental education itself and to the high intrinsic motivation of students to voluntarily participate in courses related to environmental education. In addition, according to the researchers, the focus of environmental education has a positive effect on the formation of attitudes

regarding sustainable consumption. And this is because addressing the issue of consumerism in the context of environmental education clearly increases the awareness of the need for lifestyle changes related to a more sustainable consumption.

A positive correlation between environmental education and environmental consciousness – awareness was also found in the research of Kiraz & Firat (2016), using as a sample 78 students – students of different educational levels (21 and 37 students of primary and secondary education respectively and 20 students of higher education). In addition, the authors found that environmental consciousness varies, according to educational stage, with the sample of initial educational levels approaching the environment more emotionally.

Lin & Niu's (2018) research, using a sample of 649 consumers from Taiwan, showed that the environmental education they had been taught, had a positive effect on their environmental consciousness, as reflected in their intention to purchase green products.

Environmental education programs provide individuals with knowledge about environmental issues, their causes as well as possible solutions, making this knowledge fundamental to the development of environmental consciousness (Poppe et al., 2018). At the same time, through the educational initiatives that take place, the direct and indirect effects of human actions on ecosystems are highlighted, thus strengthening the feeling of responsibility towards the environment (Liobikienė & Poškus, 2019). Essentially, environmental education helps to form values that prioritize the environment, leading individuals to make conscious efforts to protect and preserve it (Hards, 2011). These efforts are based on a change of attitude towards the environment, as promoted through environmental education programs (Arbuthnott, 2009). This behavioural change stems from the development of critical analysis capabilities of the causes and effects of environmental problems and their resolution skills (Amin et al., 2020). Citizens who have been taught environmental education are more likely to adopt pro-environmental behaviours such as recycling, conservation efforts and supporting sustainable policies as well as influence their communities to adopt environmentally conscious practices, enhancing the impact of education on broader social change (Sharma & Thapa, 2023).

Based on the above, the main hypotheses of this research are:

H1: People who have been taught environmental education at school, are more likely to adopt pro-environmental behaviours, as reflected in their daily habits.

H2: People who have previously participated in educational environmental programs or actions are more likely to adopt pro-environmental behaviours, as this is reflected in their daily habits.

### **3 Research Methodology (Method)**

In 2023, 2687 people (random sampling) aged between 18 and 29 (stratified sampling) participated in the present research. The criteria for participation in the research that were set and covered were: (1) Men and Women, aged over or equal to 18 years and up to 29 years, working or not, of all educational levels and (2) Ability to read Greek and connect to Internet.

The basic demographic characteristics of the participants are presented in Table 1. Of the total of 2687 participants, the majority were women (62.3%, N = 1674). The sample consists mainly of participants aged 18–21 years (59.7%, N = 1604). Regarding their professional status, 64.1% (N = 1721) were students and private employees follow with a much lower percentage (15.5%, N = 416). Regarding their educational level, it is observed that

**Table 1** Demographic characteristics of respondents

	<u>N</u>	<u>%</u>
<b>Sex</b>		
Man	1013	37.7
Woman	1674	62.3
<b>Age</b>		
18–21	1604	59.7
22–25	509	18.9
26–29	574	21.4
<b>Profession</b>		
State employee	133	4.9
Freelance	158	5.9
Private employee	416	15.5
College student	1721	64.1
Unemployed	117	4.3
Other	142	5.3
<b>Educational level</b>		
High school certificate	1899	70.7
University degree holder	496	18.5
Master's degree holder	132	4.9
Holder of Ph.D.	17	0.6
Other	143	5.3

70.7% (N = 1899) of the participants have obtained a high school certificate and 18.5% (N = 18.5) have completed undergraduate studies.

The research data were collected through the Google Form platform, which provides a direct way to collect the questionnaires. Then, after the data collection process was completed, the first necessary process was carried out, the coding of the variables in order to enter them into the STATA statistical program for further analysis. During the coding process, participant responses were checked for any incorrect entries, missing values, and outliers. This step is necessary to ensure the accuracy and reliability of the data before applying the final analyses.

After creating an error-free coded data file, the first exploratory analysis of variables was performed through descriptive statistics. This analysis provides an illustration of the main characteristics of the sample, as well as the remaining questions. After the descriptive analysis, a non-parametric Mann Whitney test was performed to detect possible differences in the environmental awareness of the research participants in relation to whether they have been taught environmental education at school and whether they have previously participated in an environmental program or action. The specific checking method was chosen based on the nature of the data and the requirements of the research. Finally, multiple linear regression analysis was applied to find the relationship between a dependent continuous variable (the average of the environmental awareness questions) and one or more independent variables (age, educational level, and participation in an environmental program or environmental action). In summary, the use of the Google Form platform for the collection of the samples as well as the use of the STATA statistical program for the analysis and interpretation of the data, constitutes an integrated process for drawing the research conclusions.

## **4 Results**

The survey participants were asked to respond regarding the frequency (from Never = 1 to Always = 5) of specific actions and daily habits, which frame their environmental consciousness and awareness. The results of their responses (Mean Value = MV and Standard Deviation = SD) are presented in Table 3, which shows that the survey participants rarely leave the faucet on while brushing their teeth (MV = 4.13 & SD = 1.13) and that in moderate frequency (sometimes) when they buy a product they take into account the pollution it causes to the environment (MV = 3.45 & SD = 1.12). At the same time, from Table 2 it follows that the sample with less than moderate

**Table 2** Actions and daily habits that frame environmental consciousness and awareness

	MV	SD
Do you leave the water faucet on, while brushing your teeth?(*)	4.13	1.13
Do you separate your household waste for recycling?	2.39	1.30
When you shop, do you try not to use plastic bags but paper or net?	2.69	1.23
When you buy a product, do you consider the pollution it causes to the environment?	3.45	1.12

\* Concerning the question “Do you leave the water faucet running while brushing your teeth?” the calculation of the Mean Value and the Standard Deviation was based on the following scale: from Always = 1 to Never = 5.

**Table 3**

	Yes	No
Have you been taught at school about Environmental Education?	1627 (60.55%)	1060 (39.45%)
Participation in the past in an environmental program/environmental action	1413 (52.59%)	1274 (47.41%)

frequency when shopping, tries not to use plastic bags but paper or net (MT = 2.69 & TA = 1.23) and that it separates its household waste for recycling (MT = 2.39 & TA = 1.30).

Table 3 presents the responses of the survey participants regarding whether they have been taught environmental education at school and whether they have participated in an environmental program or action in the past. 60.55% of the sample had been taught environmental education at school and 52.59% had previously participated in some action or program for the protection of the environment.

It was checked whether the distribution of the questions concerning environmental awareness in relation to the question “Have you been taught at school about Environmental Education?” follow the normal distribution. The normality assumption was tested using the Kolmogorov-Smirnov test. It emerged that none of the variables follow a normal distribution (p-value < 0.05), therefore non-parametric tests were used to assess their association.

Table 4 presents the results of the non-parametric Mann Whitney test to assess the association of the question “Have you been taught at school about Environmental Education?” with the questions concerning the environmental consciousness of the participants. According to the results, a statistically significant difference is observed in the question “When you buy a product, do you take into account the pollution it causes to the environment?” in

**Table 4** Results of the Mann-Whitney test for the evaluation of the question “Have you been taught at school about Environmental Education?” with the questions concerning the environmental consciousness of the participants

	Have you been taught at school about Environmental Education?	N	Median (q1–q3)	Z	p
<b>Do you leave the faucet on, while brushing your teeth?</b>	Yes	1627	5(3–5)	–1,604	0.109
	No	1060	5(3–5)		
<b>Do you separate your household waste for recycling?</b>	Yes	1627	2(1–3)	–1,616	0.106
	No	1060	2(1–3)		
<b>When you shop, do you try not to use plastic bags but paper or net?</b>	Yes	1627	2(2–4)	–1,694	0.090
	No	1060	3(2–4)		
<b>When you buy a product, do you consider the pollution it causes to the environment?</b>	Yes	1627	3(3–4)	–2.035	<b>0.042</b>
	No	1060	4(3–4)		

relation to whether the participants have been taught at school about Environmental Education ( $z = -2.035$ ,  $p\text{-value} = 0.042$ ). Specifically, participants who have been taught at school about Environmental Education, are more likely to consider the pollution caused by the product in the environment, than participants who have not been taught at school about Environmental Education.

It was checked whether the distribution of questions concerning environmental awareness *in relation to participation in environmental programs/environmental actions* follows a normal distribution. The normality assumption was tested using the Kolmogorov-Smirnov test. It emerged that none of the variables follow a normal distribution ( $p\text{-value} < 0.05$ ), therefore non-parametric tests were used to assess their association.

Table 5 presents the results of the non-parametric Mann-Whitney tests in order to assess whether there are significant differences in the environmental consciousness of the participants depending on, or whether they have participated in an environmental program/environmental action in the

**Table 5** Mann-Whitney test results for the evaluation of the questions concerning the environmental consciousness of the participants, in relation to the participation in environmental programs/environmental actions

	Participation in the past in an environmental program/ environmental	N	Median (q1–q3)	Z	p
	action				
<b>Do you leave the water faucet on, while brushing your teeth?</b>	Yes	1413	5(4–5)	–2,116	<b>0.034</b>
	No	1274	5(3–5)		
<b>Do you separate your household waste for recycling?</b>	Yes	1413	2(1–3)	–7,538	<b>&lt;0.001</b>
	No	1274	2(1–4)		
<b>When you shop, do you try not to use plastic bags but paper or net?</b>	Yes	1413	2(2–3)	–8,215	<b>&lt;0.001</b>
	No	1274	3(2–4)		
<b>When you buy a product, do you consider the pollution it causes to the environment?</b>	Yes	1413	3(2–4)	–7,498	<b>&lt;0.001</b>
	No	1274	4(3–4)		

past. Statistically significant differences were observed in all the questions surrounding environmental consciousness and more specifically in the question:

- “Do you leave the water faucet on, while you’re brushing your teeth?” ( $z = -2.116$ ,  $p = 0.034$ ), with participants who had previously participated in environmental programs or actions, reporting less often that they left the water faucet on while washing their hands compared to participants who had no involvement.
- “Do you separate your household waste for recycling?” statistically significant differences were observed in the responses of individuals ( $z = -7.538$ ,  $p\text{-value} < 0.001$ ), with participants who had previously participated in environmental programs or actions separating their household waste more often, compared to participants who had not participation.

**Table 6** Results of multiple linear regressions for the dependent variable of the mean of environmental awareness questions

	b	SE	t	p	95% C.I. †
<b>Age</b>					
18–21	reference				
22–25	–0.045	0.044	–1.02	0.307	–0.132, 0.042
26–29	–0.192	0.046	–4.17	< <b>0.001</b>	–0.282, –0.101
<b>Educational level</b>					
High school diploma	reference				
University degree	–0.072	0.047	–1.55	0.122	–0.163, 0.019
Master’s/PhD holder	–0.048	0.074	–0.65	0.518	–0.193, 0.097
Other	0.117	0.068	1.74	0.083	–0.015, 0.250
<b>Did you participate in any environmental program or environmental action in the past?</b>					
No	reference				
Yes	–0.318	0.03	–10.49	< <b>0.001</b>	–0.377, –0.259

$F(6, 2680) = 24.98, p < 0.001, † C.I. = Confidence Interval$

- “When you shop, do you try not to use plastic bags, but paper or net?” ( $z = -8.215, p < 0.001$ ), with participants who had previously participated in environmental programs or actions more often using paper bags or nets, compared to participants who had no involvement.
- “When you buy a product do you consider the pollution it causes to the environment?” ( $z = -7.498, p < 0.001$ ), with participants who have previously participated in environmental programs or actions more often considering the environmental pollution caused by the product they purchased, compared to participants who had no involvement.

Table 6 presents the results of the regression analysis to assess the factors possibly related to environmental consciousness. The average of the questions concerning environmental consciousness was used as a dependent variable, and age, educational level, and participation in an environmental program or environmental action were used as independent variables. The test for the overall model was found to be statistically significant [ $F(6, 2680) = 24.98, p < 0.001$ ]. Regarding the multiple regression results presented in Table 6, it is observed that participants aged 26–29 years have

increased environmental consciousness compared to participants aged 18–21 years ( $b = -0.192$ ,  $p < 0.001$ ). Similar results are observed for the participants who have participated in environmental programs, as they were found to have a higher environmental consciousness compared to the participants who had not participated in the corresponding programs ( $b = -0.318$ ,  $p < 0.001$ ).

## **5 Conclusions**

Numerous studies have shown that increased environmental education leads to greater awareness and consciousness about environmental issues. In this particular study, it was assessed whether the teaching of Environmental Education at school can contribute positively to the formation of the environmental culture of Greek citizens. According to the findings of the study, it appeared that participants who have been taught about Environmental Education at school are more likely to consider the environmental footprint of the products they buy. Regarding the rest of the practices, such as not consuming tap water unnecessarily, recycling and preferring reusable bags for their purchases, there did not seem to be any differences compared to those who had not been taught Environmental Education at school. It was also examined whether their previous participation in environmental programs has influenced their philosophy regarding the protection of the environment. Participating in environmental programs or actions, appeared to have made individuals aware of adopting habits that will protect the environment. More specifically, it was found that respondents who had participated in such initiatives in the past, stated that they do not usually leave the water faucet on while brushing their teeth. They have also adopted the recycling process for their household waste, choose alternatives to the use of the plastic bag and take into account the environmental footprint of the products they buy. Finally, it was found that the participants aged 26–29 years have an increased environmental consciousness compared to the participants aged 18–21 years. From the above, it becomes clear that environmental education enhances knowledge about the environment, emphasizing the mutual relationship between people, culture, society, the natural environment and creating citizens with environmental culture, responsibility and awareness who adopt environmental attitudes and behaviors, with a view to solving environmental problems and achieving sustainable development.

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## **Biographies**



**Georgios Nastos** is a seasoned educator, currently serving as the Principal of the 25th Primary School of Larissa since June 21, 2023. He holds a degree in Primary Education from the National and Kapodistrian University of Athens, which he completed in 2000 with distinction. In addition to his undergraduate degree, Georgios Nastos pursued postgraduate studies in Sustainable Development at Harokopio University of Athens, specializing in Environmental Management. His master's thesis, entitled *Environmental and Economic Factors as Determinants of the Sustainable Development of Primary Education School Units of the Municipality of Larissa*, was completed successfully, further demonstrating his commitment to integrating sustainability within the educational framework.

Georgios Nastos is also a PhD candidate at Harokopio University of Athens, focusing on *Environmental Education in Primary Education in relation to Sustainable Development: Policies and Recording of Attitudes in the Past, Present, and Future*. He has extensive experience in teaching, particularly in the fields of environmental education and sustainability, and has delivered workshops at the university level, including the course “Economic and Ecological Management of Housing, Settlements, and Cities.”

He has received various certifications in Information Technology, including a certification for Information Society A and B levels, and is a member of the Hellenic Chamber of Commerce. Georgios Nastos has consistently focused on integrating technology and sustainable practices into his teaching methodology, aiming to prepare the next generation for a sustainable future.



**Roido Mitoula** is Professor at Harokopio University of Athens. She holds a BA in “Political Sciences and Public Administration” from National Kapodistriako University of Athens, an MA in “Architecture of Space” and a Ph.D in “Urban Planning and Spatial Design” from N.T.U.A. She has scientific publications and has participated in numerous Greek and international Conferences. She is researcher in the Laboratory of Applied Economics and Sustainable Development of Harokopio University and she co-operated with the Laboratory of Urban Design of N.T.U.A. She specialises in issues of “Sustainable Development”.



**Eleni Theodoropoulou** is an Emeritus Professor in the Department of Economics and Sustainable Development, School of Environment, Geography and Applied Economics, at Harokopio University (HUA). Her research experience is concerned with agricultural economics, rural sociology, local sustainable development, agritourism, and quantitative and qualitative research.

Eleni Theodoropoulou is an economist holding a Master of Science in Agricultural Economics from Iowa State University (ISU), a Master of Science in Community Development and a Doctor of Philosophy in Community Development and Rural Sociology from the University of California (UC) Davis, U.S.A.



**Astara Olga-Eleni** holds a degree in Political Science and History from Panteion University, a Master's Degree in Sustainable Development with a specialization in Local Development from Harokopio University, and a PhD in the field of Sustainable Development, Corporate Social Responsibility, and the Financial Performance of Businesses. She is a faculty member at the rank of Assistant Professor with a specialization in "Sustainable Development and the Socioeconomic Dimensions of Businesses" in the Department of Regional Development, School of Economic Sciences at the Ionian University. Her research interests include Sustainable Regional Development, Corporate Social Responsibility, the contribution of businesses to urban and regional development, and Sustainable Tourism.

