

**SUSTAINABLE SCHOOL: ENHANCING ENVIRONMENTAL AWARENESS AND ENTREPRENEURSHIP THROUGH SCHOOL PROGRAMS AND VIRTUAL BUSINESSES. THE CASE STUDY OF THE UNIFIED SPECIAL VOCATIONAL HIGH SCHOOL OF AGIOS DIMITRIOS, ATTICA, GREECE**

DOI: 10.26341/issn.2241-4010-2025-7a-4-K02065

**Vasiliki Stouri**

*Information Technology Teacher, MSc, M.Ed.*

*Undergraduate Student, Economy and Sustainable Development, Harokopio University, Athens, Greece*

[hs222103@hua.gr](mailto:hs222103@hua.gr)

**Konstantinos Zervas**

*Agriculture Teacher, M.Ed., MSc*

[kzervas82@gmail.com](mailto:kzervas82@gmail.com)

**Abstract**

*Sustainable education is central to the future schools, offering students the opportunity to develop environmental awareness and entrepreneurial skills. This subject allows for consideration of ways in which schools can support sustainability through environmental programs such as recycling, energy conservation, waste management and plant cultivation, alongside the incorporation of virtual enterprise programs. These school programs enable students to develop key entrepreneurial thinking and innovation skills, implementing ecological solutions and enhance understanding of sustainable production practices. Through this experience, students learn to care for the environment and apply sustainable management principles, while participating in a virtual business gives them the opportunity to design and produce products with environmental value, cultivating leadership and innovation skills. This paper analyzes the implementation of environmental education school programs in a school with students with disabilities, combined with the creation of a virtual business, with the aim of sustainable development and social inclusion. Students, with the support of their teachers, actively participate in activities that promote recycling, waste management, energy conservation and plant cultivation. At the same time, the virtual business allows them to develop entrepreneurship skills, designing environmentally friendly products and contributing to the cultivation of environmental awareness and leadership skills. Actions are implemented through European eTwinning projects, which broaden the learning framework and strengthen cooperation with other countries. In addition, the use of a 3D printer offers students the opportunity to create original products with environmental value, cultivating sustainable production and innovation skills. The proposed approach enhances the active participation, creativity and social integration of students, forming a school environment that meets the needs of the 21st century.*

**Key words:** *Sustainable school, Environmental Education, Virtual Business, eTwinning, 3D Printing, Special Education, Social Inclusion*

## **Introduction**

This thesis focuses on the sustainability of education and specifically on the enhancement of environmental awareness and entrepreneurship through school programs and virtual businesses. The subject of the study is highlighted through the example of the Unified Special Vocational Gymnasium-Lyceum (ENEEGYL) Agiou Dimitriou, where it is examined how educational practices that promote sustainability can cultivate important skills in students, creating an environmentally and socially aware generation.

The main objective of the thesis is to explore how school programs and virtual businesses can function as effective tools for the development of environmental awareness and entrepreneurship. The main question is: How can the educational process integrate sustainable practices and enhance entrepreneurship skills in students through practical applications and examples?

The paper examines a series of concerns concerning the role of sustainability in education, the contribution of virtual enterprises as experiential learning tools, the benefits and challenges of implementing environmental education programs in special schools, as well as the importance of the example of ENEEGYL Agiou Dimitriou on exploring these issues.

The analysis will be carried out through literature review, case studies, and interviews with teachers and students of the specific school. The structure of the thesis includes the presentation of the theoretical framework for sustainable education and entrepreneurship, the analysis of educational practices and virtual enterprises, the identification of the advantages and challenges that arise, as well as the conclusions and proposals for the implementation of sustainable educational practices.

## **Methodology**

This thesis approaches the issue of integrating sustainability and entrepreneurship in school education through a multidimensional methodology, which combines literature review and case analysis. This approach aims to explore how educational practices can be adapted and incorporate sustainable and innovative strategies, with emphasis on the example of ENEEGYL Agiou Dimitriou.

## **Literature review**

The literature review process focused on the search and evaluation of scientific sources, reports of international organisations, and academic articles related to sustainable education and entrepreneurship. The review included the use of specific keywords and phrases to ensure that the sources were relevant to the subject of this work. Indicatively, terms such as "sustainable education," "environmental awareness in schools", "youth entrepreneurship," and "virtual enterprises in education", as well as phrases linked to the development strategy of UNESCO and the European Commission, were used.

The search was carried out in authoritative academic databases, such as Scopus, Web of Science, and Google Scholar, as well as on the official websites of international organisations such as UNESCO, the OECD, and the European Union. At the same time, sources from journals such as the International Journal of Sustainability in Higher Education and the Journal of Business Venturing were used, as they provide up-to-date research and theoretical frameworks related to the topic.

For chronological coverage of the bibliography, emphasis was placed on sources from 2010 onwards in order to consider the latest developments and current guidelines of international organisations. In particular, the years 2014 and 2020 were important milestones, as they mark the publication of the Roadmap for Implementing the Global Action Programme

on Education for Sustainable Development by UNESCO (2014) and the European strategy Education and Training 2030 (European Commission, 2020).

The review was based on specific selection criteria, such as the academic validity of the sources, the relevance to the topic and the applicability of the proposed practices in the school environment. In addition, sources that did not meet reliability requirements or did not focus sufficiently on sustainable education and entrepreneurship were rejected. This process ensured the collection of reliable and comprehensive data, which supported the study.

The literature review focuses on global and European sources that highlight the importance of sustainable education and entrepreneurship. The United Nations (UNESCO, 2014) in its roadmap for the implementation of the Global Action Programme on Education for Sustainable Development, stresses that education must play a central role in cultivating environmental awareness and enhancing skills, such as critical thinking, creativity, and innovation. In addition, UNESCO refers to the need to combine theoretical knowledge and experiential learning, an approach that proves to be particularly effective for students with different learning needs, such as those attending ENEEGYL.

As part of the European Education Strategy, the Education and Training 2030 programme of the European Commission (European Commission, 2020) highlights the importance of education in promoting sustainable development and entrepreneurship as key skills of the 21st century. The guidelines emphasise the need for programs that offer students opportunities to apply their knowledge in real-world environments, promoting active participation and responsibility. According to OECD (2019), in its Youth Entrepreneurship in Europe project, fostering entrepreneurship in a school environment requires not only theoretical understanding but also the application of tools, such as virtual businesses, which simulate real business scenarios.

In addition, research published in scientific journals such as the International Journal of Sustainability in Higher Education highlights the positive correlation between experiential educational practices and the development of environmental awareness in students. Similar findings have been reported in the Journal of Business Venturing, where it is documented that students involved in virtual businesses develop collaboration, leadership, and strategic thinking skills, skills considered essential for the transition to a sustainable economy.

#### Case analysis and description of school programs

The second part of the methodology includes the case study of ENEEGYL Agiou Dimitriou, a school that has incorporated initiatives that promote sustainability and entrepreneurship into its educational planning. Students participate in numerous activities, such as the development of virtual businesses, which have as their object recycling, sustainable agriculture and the production of environmentally friendly products. For example, one of the projects involves creating biodegradable soaps from used oils, an initiative that combines environmental awareness with entrepreneurial thinking.

Students are involved in all stages of operating virtual businesses, from design and production to advertising and sales management. This process not only provides them with practical knowledge but also boosts their self-confidence, as described by Meijer et al. (2018), which emphasises the importance of experiential learning in skills development.

The importance of green entrepreneurship for young people is stressed. At the same time, programs implemented at school by their students are presented with a detailed description.

## **Sustainable School - ENEEGYL Agiou Dimitriou**

The Unified Special Vocational Gymnasium-Lyceum (ENEEGYL) Agiou Dimitriou is one of the largest public special schools in Greece, belonging to the Directorate of Secondary Education of the D Athens and under the Directorate of Special Education of the Ministry of Education. The school was founded in 2017 in order to meet the needs of students with special educational needs and disabilities, offering them the opportunity to be trained in professional and academic subjects and to prepare for the labour market or for continuing education at the post-secondary level. The school is attended by about 150 students from different municipalities of Attica and is staffed by 40 teachers and support staff ([gymee-ag-dimitr.att.sch.gr](http://gymee-ag-dimitr.att.sch.gr)).

The school offers a variety of fields and specialities, such as agriculture, technical applications, mechanical engineering, and computer science, offering students a professional education tailored to their needs. Its operation is part of the Special Education School Units (SMEAE) and includes the classes of Junior High School and Lyceum, with the speciality of students being determined following the opinion of KEDDY. After completing schooling, students can go on to various educational and professional paths, such as attending a post-secondary apprenticeship year or joining other educational structures.

### **The Theoretical Framework: Sustainable Education and Entrepreneurship**

The first thematic unit analyses the theoretical framework of sustainable education and entrepreneurship, linking it to the goals and needs of modern society. According to UNESCO (2014), sustainable education is the foundation for the development of skills related to environmental awareness, critical thinking, and creativity. The OECD (OECD, 2019) points out that integrating entrepreneurship into educational programmes not only fosters creativity but also enhances collaboration, skills that are critical for the transition to a sustainable society.

Environmental Education (PE) and Education for Sustainable Development (ESD) began their journey in the 1960s, with the publication of Rachel Carson's book "The Silent Spring" (Carson, 1962), which promoted awareness of the environmental consequences of human activity. Since that time, through major international conferences and policy papers, EC/ESD has evolved into an important framework for sustainable development, integrating environmental, social, and economic aspects (UNESCO, 2005).

Following this path, decisive events and conferences, such as the Stockholm Conference in 1972 and the Rio Conference in 1992, established the importance of sustainable development and environmental education. Agenda 21 and the establishment of the Decade of Education for Sustainable Development (2005-2014) highlighted the need to apply these principles at all educational levels, both locally and globally (United Nations, 1992).

However, despite this progress, countries such as Greece have not fully completed the integration of environmental education into their education systems. Therefore, it is necessary to understand environmental problems from an early age, introducing ECEC and ESD practices into the educational process (UNESCO, 2015). Immediate action is needed to reinforce these issues within schools to enhance the environmental awareness and responsibility of young generations.

Data from UNESCO reveals that only 53% of national curricula worldwide mention climate change, and it is often given low priority. Less than 40% of teachers say they feel confident in teaching climate change, and only a third can explain its local implications. UNESCO stresses the critical need for education in tackling the climate crisis and argues that all students should gain the knowledge to contribute to solutions. A survey of 58,000 teachers

showed that many are unfamiliar with appropriate pedagogical approaches and face challenges in teaching climate education remotely, especially due to ongoing school closures due to the pandemic. <https://www.unesco.org/en/articles/only-half-national-curricula-world-have-reference-climate-change-unesco-warns>

In response, UNESCO, the UK, and Italy are organising the "Together for Tomorrow: Education and Climate Action" event during COP26, highlighting the integration of climate education and sustainability into global curricula. UNESCO calls for cooperation between the education and environment sectors to fully integrate climate change into education at all levels. <https://www.unesco.org/en/articles/only-half-national-curricula-world-have-reference-climate-change-unesco-warns>

Environmental education (PE) is an educational approach that seeks to raise awareness and prepare individuals to understand environmental challenges, develop skills to solve them, and adopt attitudes and behaviours that will contribute to the sustainability of the planet. It aims to cultivate environmental awareness and responsibility, integrating environmental issues at all levels of education and linking theory with practice through experiential and participatory activities (UNESCO, 2014). According to UNESCO (2020), environmental education includes the teaching process that offers students the opportunity to understand human relations with the natural and man-made environment and develop the necessary skills and attitudes to solve environmental issues.

PE incorporates an interdisciplinary approach, combining natural science, social sciences, and ethics, in order for students to develop integrated knowledge of environmental issues and their connections to social and economic dimensions (UNESCO, 2020). Key pillars of environmental education include developing knowledge of ecology and the natural sciences, understanding the social causes and consequences of environmental crises, and encouraging action through participation in environmental initiatives and fostering responsible environmental attitudes (Tilbury, 2011). This holistic approach not only enhances knowledge but also shapes students' personal attitudes towards sustainability, encouraging them to become active and adopt behaviours that promote environmental responsibility.

Environmental education is often combined with Sustainable Development Education (ESD), which aims to cultivate the necessary skills to achieve sustainable development. These two concepts overlap and reinforce in order to promote a sustainable society and help individuals become active citizens who understand environmental and social challenges and contribute to their solutions (UNESCO, 2020). Environmental education is also linked to the formulation of policies and strategies to tackle climate change, recognising its importance in education for the future of humanity and the planet.

Environmental education in practice incorporates a range of pedagogical methods, which include experiential learning, encouraging student participation, and using the community as a tool for the educational process. Students are encouraged to participate in actions that include garbage collection, tree planting, or the development of recycling programs, aiming to link theoretical knowledge with everyday practice (UNESCO, 2020). The experiential approach enhances understanding of environmental issues, allowing students to perceive the direct consequences of their actions on the environment and develop problem-solving and collaboration skills (Cutter-Mackenzie, 2017). Teachers are encouraged to adopt an interdisciplinary approach, integrating environmental education into subjects such as physics, chemistry, geography, and sociology, in order for students to understand the potential interaction of environmental and social parameters.

Another important element of environmental education is to highlight the social dimension of sustainability, related to understanding the economic, cultural, and social parameters that affect the environment. Integrating social justice and sustainability into educational programming allows students to recognise inequalities and differences in access

to resources, as well as the impacts of climate change on vulnerable social groups (UNESCO, 2020).

Teachers are called upon to enhance critical thinking and responsibility in order for students to develop the ability to address environmental challenges through solidarity and collective action (Jensen & Schnack, 2006). The utilisation of basic skills for sustainable development, along with the analysis of potential challenges, highlights the potential of theatre as a means that can contribute substantially to the design of educational programs for sustainable development (Pachova and Vassileva, 2024). students, but also for the development of socially responsible and active citizens.

#### Importance of green entrepreneurship for students

Fostering entrepreneurship among young people is one of the key objectives of modern education systems, as it prepares students to face the challenges of the global economy and develop critical skills for their working lives. Entrepreneurship at school fosters students' creativity, innovation, and critical thinking, enabling them to understand the importance of entrepreneurial thinking and initiative (European Commission, 2016). Through programs and actions that include the creation of virtual businesses, the development of business plans, or the implementation of social entrepreneurship programs, students develop skills related to management, collaboration, and communication, thus strengthening their future career prospects (OECD, 2015).

Entrepreneurship in school education is not only about preparing students for the labour market but also about cultivating social responsibility and ethical business action. In 21st-century society, young people are called upon to take an active role in an ever-changing economic and social environment, where social and environmental responsibility is becoming increasingly important. Entrepreneurship programs that promote sustainable development and social sensitivity help students understand the connection between entrepreneurial activity and social progress, encouraging them to create solutions that contribute to the well-being of society and the environment (UNESCO, 2020). The application of these skills in real scenarios through experiential activities and mentoring by professionals in the field prepares students for the modern labour market and provides them with the tools to develop their own business initiatives.

Entrepreneurship at school, as part of general education, also helps to boost young people's self-esteem and self-confidence. Especially in conditions of economic uncertainty, cultivating entrepreneurial thinking helps them develop the ability to think critically, plan, and adapt to new situations. Students participating in business programs understand the process from the conception of an idea to its implementation, thus enhancing their sense of success and accomplishment (European Commission, 2015). In addition, these programs encourage teamwork and collaboration, enhancing social skills and creating support networks that are crucial for their future working life (Linan, 2008).

In Europe, fostering entrepreneurship among young people is one of the central objectives of education policies, recognising the need to equip young people with the necessary skills and knowledge to face today's economic challenges. According to the European Commission, around 50% of pupils in the EU participate in entrepreneurship education programmes, but the practices and intensity of these programmes vary significantly between countries (European Commission, 2016). Although entrepreneurship education is becoming increasingly important, its integration into national education systems is still limited and depends on each country.

Another important element is teacher training, as a European Commission survey in 2014 revealed that 47% of teachers in the EU did not have the necessary training to teach entrepreneurship (European Commission, 2014). However, most teachers consider entrepreneurship education to be crucial for the development of young people, as 82% of

them recognise the importance of this education for their economic and professional paths. These results show the great need to strengthen professional programs and develop appropriate tools for teaching entrepreneurship.

Furthermore, the European Entrepreneurship Strategy recognises the need to integrate entrepreneurship into education at all levels. Despite these initiatives, according to the European Parliament's 2020 report, around 25% of education systems in the EU do not offer formal teaching of entrepreneurship and innovation (European Parliament, 2020). This disparity in the supply of educational programs creates a gap in the preparation of young people, making the need for more intensive and accessible educational programs more urgent than ever.

The statistics on entrepreneurship education in universities are also revealing. In the EU, around 31% of students attend entrepreneurship courses or participate in entrepreneurship-related actions during their university studies (Eurostat, 2020). However, its integration into all university programmes remains limited, with the result that many young people do not have the opportunity to develop the necessary entrepreneurial skills before entering the labour market.

Green entrepreneurship combines sustainable growth with business opportunities, while previous studies have shown conflicting results for factors such as entrepreneurial education, personal values, perceived behaviour control (PBC), self-efficacy, social norms, and support from universities. While some studies show positive effects, others show negative influences, especially when it comes to social norms. Using a large sample of 690 students and advanced data analysis (PLS-SEM), the research focuses on the role of cultural norms, government policies, and education in shaping intentions for green entrepreneurship, providing valuable insights into policy and educational initiatives that promote sustainable economic development in Saudi Arabia (Ali et al., 2023).

The sustainability training paradigm focuses on developing entrepreneurial competencies necessary for green entrepreneurship. Education for Durable Development (EDD) provides the knowledge, skills, and values necessary for sustainable living. Green entrepreneurship is influenced by internal factors such as creativity and resilience and external factors such as supportive policies and education (Anghel and Anghel, 2022). Key competencies include risk-taking, innovation, leadership, and social responsibility. Positive factors for green entrepreneurship include strong entrepreneurial skills and motivation, while obstacles include bureaucratic challenges and poor resource management (Anghel and Anghel, 2022). These competencies are crucial for students to succeed in creating sustainable businesses (Anghel and Anghel, 2022).

Research in Romania (2020) shows that 60% of entrepreneurs belong to the 31-45 age group (Anghel and Anghel, 2022). Among students aged 26-28, there is a strong interest in green entrepreneurship, driven by factors such as funding opportunities, desire for financial independence, and support for university business incubators (Anghel and Anghel, 2022). Psychologists note that this age group is characterised by self-confidence, independence, and concern for environmental issues, seeing green entrepreneurship as a sustainable career (Anghel and Anghel, 2022). There is a noticeable difference in interest between younger students (22-25) who focus on university studies and those in the larger group who focus more on business development (Anghel and Anghel, 2022).

At the same time, in the study by Moiceanu et al. (2023) respondents believe that achieving turnover in green entrepreneurship is relatively easy, with 35% expressing this opinion. Despite not agreeing or fully understanding many aspects of green entrepreneurship and some not being familiar with the term itself, 46% of respondents said they would consider green entrepreneurship as a viable option based on the statements provided and other factors (Moiceanu et al., 2023). This shows a growing openness to the idea, even among those with

limited knowledge or disagreements about specific elements of green business (Moiceanu et al., 2023).

In addition, the study by Niemczyk et al. (2024) found that different groups had different perceptions of green entrepreneurship. Working students mostly associated it with activities such as tree planting and corporate social responsibility, while professionals focused on things like using alternative energy and saving resources (Niemczyk et al., 2024). Students showed greater diversity in their views, linking green entrepreneurship to various areas such as environmental protection, business models, and trends (Niemczyk et al., 2024). Professionals, however, had a more consistent understanding, linking it primarily to environmental protection and sustainable business practices. This shows that students still understand what green entrepreneurship means, while practitioners have a clearer, more focused view (Niemczyk et al., 2024).

The above data show the need to further develop entrepreneurship education programmes in Europe and ensure that all young people have the opportunity to develop the skills and knowledge needed to succeed in an ever-changing economic world.

Examples of the application of these theoretical principles can be found in the programs developed by the school. For example, the GROW (Gardening, Researching and Observing the World) project, involving schools from Greece, Turkey, Romania, Poland, and Portugal, is a prime example of linking experiential education with environmental awareness.

The project focuses on understanding and exploring the natural environment through activities that are tailored to the needs of students with disabilities. At the same time, it enhances ecological awareness and promotes skills such as collaboration and communication (European Commission, 2020). Then, it is analysed how these educational practices contribute to the development of environmental awareness, considering the guidelines of international organisations.

Finally, the school participates in the Junior Achievement Greece competition with the 3D Green Pot action. Students create a virtual business. In this programme they combine the concepts of reuse, 3D printing, and plant protection.

### **The GROW Example**

eTwinning projects are an educational initiative of the European Union, which provides an online platform to strengthen cooperation between schools from different countries. Through eTwinning, teachers and pupils have the possibility to participate in joint projects, exchanging knowledge, ideas, and cultural experiences, using new technologies to create cross-curricular learning activities. The aim of the platform is to encourage the development of the European dimension in education, promoting cooperation and understanding between different cultures and education systems (European Commission, 2020). The projects developed incorporate a variety of topics, such as science, art, cultural understanding, and environmental awareness, thus promoting learning with interest and meaningful engagement.

In addition, eTwinning provides an excellent opportunity for teachers to participate in a dynamic professional network. Through the platform, teachers have access to training courses, online learning communities, and materials, which allow them to develop new teaching methods and exchange good practices. The platform offers a supportive environment for creating and implementing innovative teaching approaches, enhancing teachers' digital skills, and fostering collaboration in the professional community. This dynamic environment contributes to teachers' ongoing professional development, enabling them to improve their educational practices and incorporate new technologies into their classroom.

For pupils, participation in eTwinning projects has significant benefits, as it gives them the opportunity to develop skills necessary for the 21st century. Through collaboration with

students from other countries, students enhance their capacity for intercultural communication, cooperation, and problem-solving while developing their digital skills (European Commission, 2020). Participation in international projects strengthens their sense of European identity and prepares them for a globalised society, while this process encourages active learning and creativity. Students have the opportunity to work on joint projects, create original material, and present the results of their efforts in a global community context, thus offering a real-world educational experience through action.

The GROW project incorporates innovative practices that promote environmental education and entrepreneurial thinking. Students from five different countries participate in activities such as gardening, researching environmental problems, and developing strategies to protect nature. These activities enhance students' self-confidence while offering opportunities for social inclusion and cultivation of their communication skills (Meijer et al., 2018).

The implementation of such programs includes collaborative actions, such as joint garden care, sustainable product development, and presentation of results in competitions or local communities. Teachers use tailor-made tools to support students with disabilities, and activities are designed to be accessible to all.

The multidimensional approach of GROW shows how the combined use of experiential learning and scientific observation can lead to positive results. For example, students in Portugal investigated the use of recycled materials to create artistic works, promoting the concept of reusing materials.

### **Green Pot 3D Virtual Business**

Junior Achievement (JA) Greece offers programs focused on entrepreneurship, financial literacy, and 21st-century skills. Its purpose is to equip students with practical knowledge, enhancing their social and professional skills. Through experiential activities, students develop responsibility, cooperation, and judgement. The programme strengthens schools' connection to the real market and promotes social responsibility and sustainability.

Junior Achievement Greece has designed educational programs aimed at pupils and students, supporting over 148,000 people and collaborating with over 7,200 schools and application units. At the same time, the organisation offers 1.9 million hours of mentoring by 7,300 volunteers and 8,144 teachers.

The programme "Student Virtual Enterprise" of Junior Achievement Greece, in which the Department of B' Management and Economics participates, aims to introduce students to the concept of entrepreneurship through experiential experiences. In collaboration with EEEK Agiou Dimitriou, students take on roles in a virtual business, developing skills such as decision-making, organisation, and collaboration. Through expert guidance, students have the opportunity to create and promote their own business ideas. One of the most interesting outcomes of this collaboration is the establishment of the student enterprise "Hungry Minds", which promotes the concept of "sustainable canteens" through innovative applications and technologies while incorporating the principles of inclusion and environmental protection.

The students of the company participated in several activities, such as meetings with the journalist Maria Nikoltsiou, who took on the role of mentor and guided them in the development of their idea. Also, the team visited the headquarters of the Grigoris company, where they had the opportunity to learn about the operation of a professional business and gain valuable knowledge about the organisation and procedures of a commercial unit. The participation in the trade fair at The Mall Athens, where they came into contact with other schools and presented their work, was an important experience for the development of

students' presentation and communication skills, while at the same time it enhanced their business perception and their ability to exchange views and ideas.

The 3D Green Pot program, developed by the students of ENEEGYL Agiou Dimitriou is an innovative initiative that combines sustainable development, business education, and technology. The aim of the programme is to create three-dimensional pots from recyclable materials, which will be used to rescue abandoned plants from the urban fabric. The students, through the process of developing and implementing the idea, enhance their skills, while at the same time cultivating their ecological consciousness.

The product of the program, the three-dimensional printed pots, was designed with specific features that meet the needs of the modern city. The pots are made from recycled filament plastic, boosting the circular economy and reducing waste. They are weather resistant and have an innovative water storage system to ensure the care of the plant even when its owner is absent for a few days.

The implementation process involves several stages. Initially, students developed the business idea, emphasising sustainability and solving existing environmental problems. Then, the name and logo of the company were designed, while at the same time the roles and jobs were defined, giving students the opportunity to get acquainted with the operation of a real business. Securing financing and procuring the necessary materials were critical steps in starting production.

The project is already underway, with the printing of the first 3D pots completed. In addition, an online platform has been created, through which citizens can report locations of abandoned plants or pots. This action enhances interaction and collaboration with the local community, making the programme a core of social awareness.

The program's strategy includes future expansions, such as the development of a mobile application. Through it, users will be able to locate abandoned plants, order pots, and share information on sustainable gardening practices. In addition, there is provision for expanding the company's reach at a national and international level through partnerships with other organisations.

The 3D Green Pot programme combines education with sustainability, providing students with the opportunity to develop skills that will be useful to them in the future. At the same time, it contributes to the protection of the environment and the formation of a more conscious society, setting a model of sustainable development and circular economy.

Engaging students in entrepreneurship through a programme such as the 3D Green Pot offers multiple benefits that enhance their personal development, professional preparation, and the creation of meaningful skills. First, students gain self-awareness and confidence as they assume specific roles within the "company" and are involved in decision-making processes. Their participation in real business activities, such as resource management, product creation, and goal achievement, offers an early but meaningful "work" experience (Kolb, 1984). This experience allows students to identify and utilise their talents while contributing to their personal empowerment.

In addition, the programme enhances the process of career guidance, as students are required to take on roles linked to specific professional fields. Through this experience, they encounter the concept of money management and understand how financial resources are created and utilised. This element is important for shaping financial literacy, a crucial tool for adult life, as Lusardi and Mitchell (2014) point out.

At the same time, students learn to collaborate effectively with their "colleagues" or classmates, developing social skills such as communication, conflict management, and teamwork. Participation in such activities also encourages time management and deadline keeping, skills that are essential for professional success (OECD, 2018). The interactive

nature of the programme also cultivates the ability to organise, create innovative solutions, and correct behaviour in the work environment.

## **Conclusions**

Examining the different aspects of environmental education and entrepreneurship among young people in the education system demonstrates the significant challenges and opportunities associated with these two themes. Initially, environmental education plays a critical role in raising students' awareness of climate change and sustainable development. However, international and European statistics show that, although environmental education is integrated in many countries, there are significant variations in the quality and intensity of its implementation, with many education systems, such as the Greek one, not fully incorporating these principles.

Fostering entrepreneurship in schools is equally important for developing new skills in students. Despite the lack of generalised programmes in many countries, entrepreneurship education fosters creativity, innovation, and leadership skills among young people, which are essential for their career paths and participation in the economy. In Greece, entrepreneurship programmes remain limited, with the need to systematically integrate them into the education system to ensure the development of these competencies in students.

Overall, the needs for expanding environmental education and enhancing entrepreneurship among young people are critical priorities for integrating the modern demands of society and the labour market into the school context. In order to effectively address the challenges arising from climate change and create the necessary conditions for economic and social development, it is necessary to formulate strategies that integrate these themes appropriately into education, both locally and internationally.

## **References**

- Ali, M. A., Ammer, M. A., & Elshaer, I. A. (2023). Born to be green: Antecedents of green entrepreneurship intentions among higher education students. *Sustainability*, 15(8), 6668. <https://doi.org/10.3390/su15086668>
- Anghel, G. A., & Anghel, M. A. (2022). Green entrepreneurship among students—Social and behavioral motivation. *Sustainability*, 14(14), 8730. <https://doi.org/10.3390/su14148730>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Carson, R. (1962). *Silent spring*. Houghton Mifflin.
- Cutter-Mackenzie, A. (2017). Environmental education: An overview. In *Handbook of research on environmental education*. Springer.
- European Commission. (2014). *Entrepreneurship in education: A guide for educators*. Directorate-General for Education and Culture, European Commission.
- European Commission. (2015). *Entrepreneurship education: Enabling teachers as a critical success factor*. Directorate-General for Education and Culture, European Commission.
- European Commission. (2016). *Entrepreneurship education: A guide for educators*. Directorate-General for Education and Culture, European Commission.
- European Commission. (2020). *Education and training 2030*. Brussels: European Union.
- Eurostat. (2020). *Students enrolled in entrepreneurial education*. European Statistical Agency.
- Jensen, B. B., & Schnack, K. (2006). The action competence approach in environmental education. *Environmental Education Research*, 12(3), 471-486.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

- Linan, F. (2008). Skill and value perceptions: How do they affect entrepreneurial intentions? *International Entrepreneurship and Management Journal*, 4(3), 257-274.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44.
- Meijer, M., Schaveling, J., & Bouten, L. (2018). Entrepreneurial learning in sustainable development: A multi-level approach. *International Journal of Sustainability in Higher Education*, 19(1), 15-34.
- Moiceanu, G., Popescu, M., Barbu, A., & Moiceanu, A. D. (2023). Green entrepreneurship among students. 11th International Conference of Management and Industrial Engineering, Bucharest, 11. Available at: <https://icmie-faima-upb.ro>
- Niemczyk, A., Grodek-Szostak, Z., Adler, D., Niewiadomski, M., & Benkova, E. (2024). Green entrepreneurship: Knowledge and perception of students and professionals from Poland and Slovakia. *Sustainability*, 16, 273. <https://doi.org/10.3390/su16010273>
- OECD. (2015). *Entrepreneurship at a glance 2015*. OECD Publishing.
- OECD. (2018). *The future of education and skills: Education 2030*. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2019). *Youth entrepreneurship in Europe*. Paris: OECD Publishing.
- Pachova, N., & Vassileva, R. (2024, March). Educational theatre and sustainable development: Critical reflections based on experiences from the context of Bulgaria. Sofia University "St. Kliment Ohridski".
- Samuel, K. (2024). The importance of environmental education: Teaching sustainability in the classroom. Kiu Publication Extension, Kampala International University.
- Tilbury, D. (2011). *Education for sustainable development: An expert review of processes and learning*.
- UNESCO. (1975). *Tbilisi Declaration: The final report of the Intergovernmental Conference on Environmental Education*. UNESCO.
- UNESCO. (1992). *Intergovernmental Conference on Environmental Education: Tbilisi Declaration*. UNESCO.
- UNESCO. (2005). *United Nations Decade of Education for Sustainable Development (2005-2014)*. UNESCO.
- UNESCO. (2014). *Roadmap for implementing the Global Action Programme on Education for Sustainable Development*. Paris: UNESCO.
- UNESCO. (2020). *Education for Sustainable Development Goals: Learning objectives*. UNESCO.
- UNESCO. (2021). *Global Education Monitoring Report 2021: Sustainability in education*. Paris: UNESCO.
- United Nations. (1992). *Agenda 21: Programme of action for sustainable development*. United Nations Conference on Environment and Development (UNCED).
- United Nations. (2002). *World Summit on Sustainable Development (WSSD) Outcome Document*. United Nations.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations.
- United Nations Conference on the Human Environment. (1972). *Stockholm Declaration on the Human Environment*. United Nations.
- World Commission on Environment and Development (WCED). (1987). *Our common future*. Oxford University Press.