

Sustainable school: the challenge of future

Abstract

In last year's the main aim of modern societies is their sustainable development and that's why emphasis is given in the development of sustainable education and in the creation of sustainable schools. Especially, the sustainable school is a visionary school that functions as a community. It is based on the communication and cooperation of all the members of the school community and in school life it offers opportunities for all to develop a team and participative spirit in the effort to take part in the learning environment, in the operation of schools and in the organization of local societies. A sustainable school also serves democracy and human rights, promotes culture and the environment and shapes active and creative citizens. The importance of sustainable schools is presented by many researchers, as it is needed in last years to give physical place, organizational culture and educational program, so that it can be promoted the development of global citizens, who are environmentally conscious. As it is believed in many cases students spend more hours of their most important years for their development in a school building. That's why must be created schools, which can operate as a sense of responsibility and awareness, a starting point for developing, a source of inspiration and a space for development of creative thinking. In this way it is very important for students to be educated in a sustainable and healthy environment, where is created a culture of continuous development, learning, growth, and learning. Also, in sustainable schools is cultivated a progressive and positive school culture, so that teachers can have more learning opportunities and students can develop critical - thinking and problem- solving skills.

Based on the importance of the operation of sustainable schools, in this research will be studied and evaluated the role and the specific characteristics of sustainable schools in the effort to be combined community engagement and environmental education. Especially, the interest for sustainable education is big in Cyprus at all educational levels. Sustainable education is an example of a good global practice and that's why it has been developed a scientific dialogue for the operation of Cypriot sustainable schools. In this way, in this study will be used the method of case study, as it be analyzed the operation of the sustainable school in Nicosia of Cyprus, so that it can be understood its role in the development of sustainable education and its combination with cultural and urban heritage and urban design, with new technologies of planning and engineering for the sustainable school and with the future of Nicosia. Also, will be evaluated their main aims in the effort sustainable schools to study and promote environmental themes and themes of sustainable development. Essentially, will be presented how we have been led from the texts of the language lesson of the Primary School to the creation of the sustainable school. Except these, will be analyzed the philosophy of the curriculum through the theories of architectural education and sustainable development and finally the planning of the sustainable school of future.

Keywords: sustainable school, urban and cultural heritage, sustainable development, social sustainability, architectural education

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Marios Demosthenous

The Cyprus Institute, Cyprus

Correspondence: Marios Demosthenous, The Cyprus Institute, Cyprus, Email mariosdemosthenous@hotmail.com

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Introduction

Various changes have taken place in Europe in economic and social terms in recent years. Dissemination of knowledge, the development of technology and also of science has brought knowledge as an important educational and political tool for achieving economic and sustainable growth. In this context, the design and implementation of education systems, which determine the social, economic and cultural development of the European states and the well-being of their citizens, is important. Different education and training systems are presented in Europe and the structures of each level of education operate differently.

In many cases, however, in Europe, the maintenance of traditional and centralized education systems prevents the implementation of innovative programs and therefore prevents the activation of social participation bodies. However, in this context, emphasis is given on the need to renew and modernize the design of how to shape education policy, achieving social justice in the area of knowledge. Moreover, the implementation of decentralization in the European education systems

allows for the widest possible implementation of the educational themes. By strengthening the way in which social participation bodies are active in European education systems, it is also possible to enhance the degree of implementation of democratization and decentralization as basic forms of modernization of European education systems and the way in which educational issues.¹

However, particular emphasis must be placed on the need to adopt innovative practices and educational policies, with a view to modernizing the way in which educational forms work and the design of the educational process. Effective management of innovation in the school environment is determined by the experiences, knowledge and skills of school leaders, who are required to identify and use appropriate mechanisms to implement educational change and, more generally, to manage effectively innovation in their educational units.

In this way is understood the interest in our era for the development of sustainable school. As it is believed, sustainable school is the school that attempts to provide students the needed opportunities of learning and all those experiences that will enable them to shape the conditions

of their lives in a creative and constructive way. With these choices, at the center of school life can be put the principles of sustainability, which can lead to the modernization of the operation of schools. We can also say that sustainable school is based on the integration the values and the idea of sustainability into the management of the building infrastructure, the learning process, also into all its functions and essentially into the school's relations with the school and the wider local community.

That's why in most European countries and especially in Cyprus are developed the sustainable schools in order to create democratically responsible citizens and a world, based on the principles of society, environment and economy. In this way, in this research will be analyzed the role of sustainable schools, by giving emphasis on the issues of urbanism, engineering, urban design, urban heritage and cultural heritage. Especially in the first chapter will be analyzed the role of innovation in modern schools, by giving the opportunities to understand how from the school textbook of language teaching we have been led to the implementation of innovative programmes and to sustainable schools. In the second chapter will be analyzed the principles of sustainable schools and also the changes, which will be promoted in the sector of modern education. In the third chapter, will be presented why has been preferred this methodology and then will be analyzed the characteristics of sustainable school in Nicosia of Cyprus and generally its role. Finally, will be presented the needed conclusion and recommendation for the operation of sustainable school.

The innovation in modern school

The role of the school textbook of language teaching

School textbooks seek to activate cognitive and emotional mechanisms as well as learning mechanisms, seeking to make the classroom a learning area. They act as direct sources of knowledge-gathering, but also as agents for widening the opportunities for processing and critically evaluating this knowledge. Based on the importance of language teaching for the proper learning of spoken and written language, it is very important to explore the role of school language teaching manuals. For this reason, particular emphasis should be placed on the contribution of textbooks to the development of pupils' ability to handle written and spoken language in an adequate, conscious, responsible, creative and effective manner and to create the conditions for effective linguistic communication.² The main objectives of its teaching language in the new school textbooks are:

1. Guiding the teaching.
2. Enable learning incentives.
3. Socialization and also enrichment of ideas.
4. Imprinting the reality.
5. Differentiation of the organization and content of school texts.
6. Reflection of the material taught and student assessment.

In addition, it should be noted that the character of the school textbook is teaching and pedagogical. In essence, with their way of structuring and organizing their content, they seek to:

1. Cognitive goals.
2. Emotional goals.
3. Psychomotor goals.
4. Developing social values.
5. Metallurgical skills.

Many scholars of language school textbooks claim that they seek to activate students' critical linguistic awareness so that students can be considered as equal interlocutors. At the same time, students can enhance their critical ability to be able to process the difference messages. Also, these manuals contribute to the realization of the various communication goals. These goals are met through the vision of language as a social semiotics. By studying texts with differential content and different types of speech, conditions are created to enable students to meet social requirements. In this way, the pupils' oral and written speech is used in informal forms of communication.³

We can say that in many researchers will be present the necessity of digital and technological literacy. With the ultimate goal of making use of modern language teaching, it is clear that it is necessary to change the contents of textbooks so that language teaching uses new technologies and is not limited to the use of language. Especially, the context of textbooks and analytics programmes will be based in our era in the principles of sustainability, as it will be analyzed in the next chapters. Here's a detailed explanation of the main objectives of teaching language in new school textbooks in light of the concept of sustainable schools:

1. Fostering environmental awareness and responsibility:

New school textbooks should aim to cultivate environmental awareness and responsibility in students by incorporating language activities and exercises that focus on:

- i. Understanding the principles of sustainability: Introducing students to the concept of sustainability, its importance, and the challenges it presents.
- ii. Exploring environmental issues: Discussing various environmental issues, such as climate change, pollution, and resource depletion.
- iii. Promoting eco-friendly habits and practices: Encouraging students to adopt eco-friendly behaviors in their daily lives.
- iv. Engaging in community-based environmental projects: Facilitating student participation in local environmental initiatives.
- v. Integrating environmental vocabulary and concepts: Incorporating a wide range of environmental-related vocabulary and concepts into language lessons.

2. Promoting collaborative problem-solving and decision-making skills:

In addition to environmental awareness, new textbooks should focus on developing students' collaborative problem-solving and decision-making skills through language activities and exercises that encourage:

- i. Identifying environmental problems in their community: Engaging students in discussions and activities to identify environmental issues in their surroundings.
- ii. Analyzing the causes and effects of environmental problems: Guiding students to analyze the root causes and consequences of environmental issues.
- iii. Devising solutions and strategies for environmental protection: Encouraging students to brainstorm and discuss potential solutions and strategies to address environmental problems.
- iv. Participating in decision-making processes: Incorporating exercises that require students to weigh different options and make informed decisions regarding environmental issues.

- v. Using language to advocate for environmental causes: Developing students' ability to communicate effectively about environmental issues and advocate for sustainable practices.
3. Enhancing intercultural communication and sensitivity:
- i. Sustainable schools promote global citizenship and intercultural understanding. New textbooks should incorporate language activities and exercises that foster.
 - ii. Exploring environmental issues from a global perspective: Discussing environmental issues from a global standpoint, highlighting the interconnectedness of environmental challenges across cultures.
 - iii. Learning about different cultures' approaches to sustainability: Introducing students to various cultural perspectives on sustainability, highlighting their unique contributions and practices.
 - iv. Engaging in cross-cultural dialogues on environmental topics: Facilitating student discussions and activities that encourage intercultural exchange and understanding regarding environmental issues.
 - v. Promoting empathy and respect for different cultures' environmental values: Fostering an appreciation for the diverse ways different cultures value and protect their environments.
 - vi. Using language to bridge cultural divides and promotes sustainable solutions: Developing students' ability to communicate effectively across cultures to address shared environmental challenges.
4. Integrating technology and digital literacy for sustainable solutions:
- New textbooks should emphasize the role of technology in addressing environmental issues and promote digital literacy skills for sustainable practices, including:
- i. Using technology to gather and analyze environmental data: Incorporating exercises that guide students in using online resources and tools to analyze environmental data and trends.
 - ii. Creating digital presentations and campaigns for environmental awareness: Encouraging students to utilize technology to create multimedia presentations and campaigns to raise awareness about environmental issues.
 - iii. Collaborating online to address environmental challenges: Facilitating student collaboration through online platforms to work on projects and initiatives that promote sustainability.
 - iv. Evaluating the credibility of online information related to sustainability: Emphasizing the importance of critical thinking and evaluating information sourced from the internet.
 - v. Using digital tools to connect with global communities for sustainable action: Promoting the use of technology to connect with like-minded individuals and groups working on sustainable initiatives worldwide.
5. Fostering a lifelong commitment to sustainability:
- New textbooks should instill a lifelong commitment to sustainability by incorporating language activities and exercises that encourage:

- i. Developing a personal vision for a sustainable future: Guiding students to envision their role in creating a more sustainable future and articulating their aspirations.
- ii. Integrating sustainable principles into personal decision-making: Encouraging students to apply sustainable principles in their personal lives, such as choosing eco-friendly products and behaviors.
- iii. Engaging in lifelong learning about sustainability: Promoting a passion for continued learning about environmental issues and sustainable practices.
- iv. Acting as a catalyst for positive change: Encouraging students to become agents of change in their communities and society as a whole.

Using language to inspire and motivate others to embrace sustainability: Developing students' ability to communicate effectively about sustainability to inspire and motivate others to join the cause.

The importance of interaction between students and teachers: Sustainable schools encourage collaboration and participation from all members of the school community. Language education can reinforce these values through activities that encourage students to interact with each other and their teachers. For example, students could collaborate to create projects that promote sustainability, or they could participate in discussions and consultations on environmental issues.

The use of language for creating change: Sustainable schools aim to prepare students to become active citizens who can create positive change in the world. Language education can support this goal through activities that encourage students to use language to express their opinions, promote causes, and work to address environmental problems. For example, students could write articles or letters about environmental issues, or they could participate in sustainability campaigns.

The evaluation of the effectiveness of language education: It is important to evaluate the effectiveness of language education in sustainable schools to determine if it is meeting its goals. Researchers could use a variety of evaluation methods, such as surveys, assignments, and interviews, to collect data on the impact of language education on students' knowledge, skills, and values. Here are some specific ideas for activities and assignments that could be used for language education in sustainable schools:

Activities for exploring environmental issues: Students could read articles, watch movies, or conduct research to learn about environmental issues such as climate change, pollution, and resource depletion. They could then participate in discussions and activities to share their opinions and develop strategies for addressing these issues.

Activities for developing problem-solving skills: Students could work in groups to develop solutions to environmental problems. For example, they could consider the factors that contribute to the problem, create different solutions, and evaluate the potential consequences of each solution.

Activities for promoting collaboration and participation: Students could collaborate to create projects that promote sustainability. For example, they could create educational videos or brochures about environmental issues, or they could participate in sustainability events in their community.

Activities for using language to create change: Students could write articles or letters about environmental issues, or they could participate in sustainability campaigns. For example, they could create a blog to raise awareness about an environmental problem, or they could participate in a protest for sustainability.

Language education in sustainable schools has the potential to have a positive impact on students' environmental awareness and action. By using appropriate activities and assignments, teachers can help students develop the knowledge, skills, and values they need to become active citizens who can create positive change in the world.

Here are some additional details that could be included in the research:

1. The role of the school environment: The school environment can play a role in supporting language education for sustainability. For example, schools could incorporate sustainable design features, such as energy-efficient lighting and water conservation measures. They could also provide opportunities for students to interact with the natural world, such as through outdoor learning spaces or community service projects.
2. The perspectives of students, teachers, and administrators: It is important to gather the perspectives of all stakeholders involved in language education for sustainability. This could be done through surveys, interviews, or focus groups.
3. The challenges and opportunities of language education for sustainability: There are a number of challenges and opportunities associated with language education for sustainability. For example, one challenge is that teachers may need to develop new skills and knowledge to effectively teach about sustainability. One opportunity is that language education can be a powerful tool for engaging students in sustainability issues.

By considering these additional details, researchers can gain a more comprehensive understanding of the role of language education in sustainable schools.

The implementation of innovative programs in education

Modern school is required to face various challenges and meet the demands of modern globalized and intercultural society. Based on the strengthening of the need to modernize the way the modern school operates and to upgrade the learning environment, the conditions for the implementation of innovative programs, which can successfully and effectively meet the educational objectives, are created.⁴

The exploitation of new technologies is considered a key factor in upgrading and modernizing the learning environment. Essentially, it is argued that by applying them to modern educational units, students' self-activity is developed and their autonomy is enhanced in a way that can modernize their way of thinking and broaden their spiritual horizons. Apart from the implementation of new technologies in the educational process, however, the use of innovative programs, which can contribute to shaping the social consciousness of students and their smooth socialization, is also important.⁵

The concept of innovation appears in a variety of fields of human activity and for this reason has attracted the interest of several scholars. Based on the Organization for Economic Cooperation and Development (OECD, 2000), innovation is the "process of changing a new idea or one initiative in a marketable product or service, or even a highly efficient and functional distribution tactic. In addition, it can also be transformed into a method characterized by the provision of a social service." Essentially, therefore, in a broader context, innovation refers to the ability of an organization to adopt new services and products, stemming from modernized ideas. However, interest of

many researches focuses on school innovation, which often occurs in the form of reforms, in an effort to successfully address the various challenges at political and social level. The most important of these challenges are:

1. The process of interdependence of the various peoples, which is promoted through globalization.
2. Continuous and rapid development of science and technology.
3. Strengthening social inequalities.
4. Radical changes in the labor market.

Before interpreting the concept of school innovation, it should be noted that "learning cannot be considered just as a process of constructing knowledge, but rather more like a process of identity formation. Since learning transforms what we are and what we can do, it is an identity experience. It is not just a collection of skills and information, but a process of becoming".⁵

Based on this particular nature of learning, the main goal of the learning process is to provide students with incentives to autonomously take initiatives and enhance learning. In this context, innovation can be considered:

1. Any activity contributes to the development of curricula.
2. The emphasis on strengthening holistic learning.

The application of innovations is therefore a key factor in the effective operation of school units in modern reality. In addition, this application is evidenced by the following features:

1. Capturing and adopting new ideas from all stakeholders in the educational process.
2. A leading edge in the implementation of innovative ideas.
3. The impact of innovative ideas on the operation of the school unit.
4. Rapid exploitation of innovative ideas.
5. Participatory decision-making.
6. Incentives.
7. Effective management of materials and human resources cultivating school vision.
8. Cultivating a collaborative climate.
9. Effective school leadership.

The functionality of innovative programs in the field of education is also presented in creating an attractive learning environment for pupils and teachers, which will facilitate the active participation of all stakeholders in the educational process. Essentially, the use of innovative programs, the design and their selection can extend the way knowledge is approached and promote the renewal of the learning environment. In order to understand their importance, it should be noted that their application is often promoted in the design of curricula, the enrichment of educational skills, the formation of school culture and the organization of the educational process.⁶

Moreover, their application is considered to be determined by the awareness of their role by the teachers themselves, but also by their ability to participate in the way they are designed and implemented. In this way can be explained the creation of sustainable schools, as it will presented and analyzed subsequently.

The sustainable school

The principles of sustainable school

The sustainable education

The modern age despite the progress that characterizes the field of technology and science in the effort to improve the quality of human life, is characterized at the same time from multiple problems in the field of economy, society and of the environment. These conditions cannot be considered favorable for the well-being of modern persons. The intense economic crisis that today affects a large part of the world, including also and developed countries, is indissolubly linked to environmental crisis and, also generally to the crisis in modern societies.

The environmental crisis stems from its unsustainable management environment, waste of natural resources and energy, with aim of cheap mass production to satisfy consumer's wishes. The effort to solve these problems requires a sustainable, viable and lasting solution. That's why sustainable development is the type of development, which can restore balance to the global system of environment, economy and society, with the aim of long-term improvement and maintaining quality of human's life. We must say that sustainable development is the development which can meet the needs of the present, without creating problems to future generations in the effort to cover their own needs (Figure 1).¹

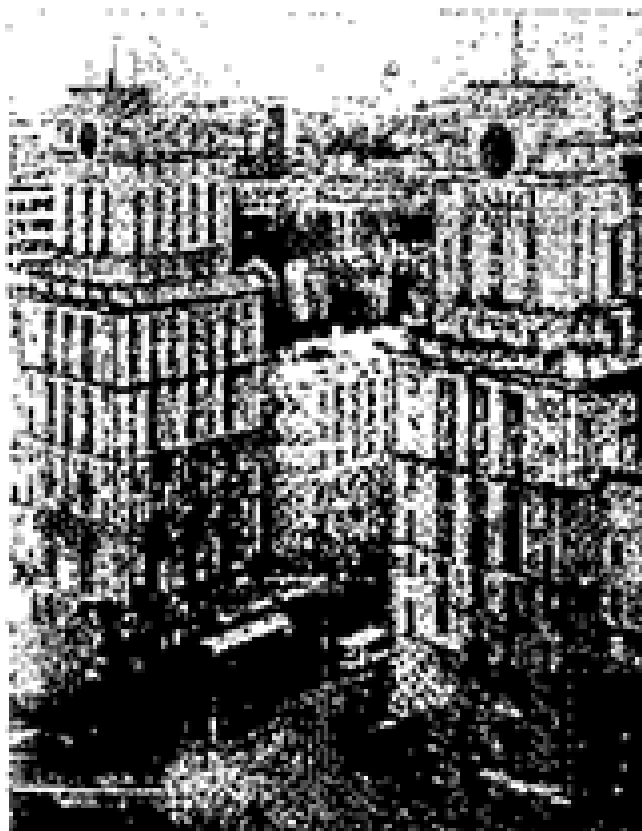


Figure 1 Sustainable development in modern cities.

In this way it is believed that sustainable development requires a global revolution in thinking and action of the citizens. This type of development requires the development of respect, critique and systemic thinking, participation and interest and the presence of ethical values. Many researchers also believe that is also required cooperation, coordinated actions at international, national, regional

and local level and with the participation and cooperation of the public and the private sector and also of citizens.

The connection of sustainable development with education dates back to the 80's. But the idea of one education that promotes sustainable development began to be formulated at the International Conference on the Environment and Development in Rio de Janeiro in 1992. Also, in 2005 United Nations promoted the Decade of Education for Sustainable Development, which ran until 2014 and which cultivates the interest for sustainable education. The aims of this effort are:

1. Develop strategies at every level to strengthen the effectiveness of this type of education.
2. Improve the quality of teaching and learning at framework of sustainable education.
3. Provide opportunities, through all forms of education, so that citizens can be sensitized and so that can be real the use of sustainable development.
4. Facilitate the contact and the interaction between all those, who are involved on the use of sustainable education.⁷

In this way can be understood the role of sustainable education and that's why have been operated at global level sustainable schools, which will be described and evaluated below.

The role of sustainable school

As it is mentioned in our era is given emphasis on sustainable education, so that modern students can understand the role of sustainable development. We must say that this type of school seems to be a visionary school, which can operate as a community. Main interest is given on the communication and cooperation of all the members of the school community and every day are offered opportunities for all to participate in sustainable management in a team and participative spirit. A sustainable school also serves democracy and human rights, promotes culture and the environment and shapes creative and active citizens. This type of school was created in the beginning of 21st century, with the presentation of modern pedagogical thought and has led to the modernization of school's operation.⁸

Sustainable school tries to make all the participants in the educational process to understand that sustainable development isn't theoretical only but also is based on specific practices, applications and context, that can help all the participants to find the needed answers in the questions of everyday school's also and also to help them to find solutions in their problems and in the management of modern schools. Also, sustainable school strengthens green economy, green entrepreneurship, the sectors of innovation and creation and also is based on its transformative character.

Many researchers consider that this type of school is based on sustainable development, by creating environmentally responsible, democratic and active citizens. Also, it is based on the introduction of diverse and flexible learning through the establishment of horizontal networks of communication. Its operation involves a total reconstruction of the school at:

1. The organizational / artificial context.
2. The social level.
3. The organizational and artificial context.

The basic principles of sustainable school are:

1. Democracy and participation in the operation of school an in the educational process.
2. The promotion of culture and arts in school.
3. The improvement of learning's process.
4. The policy on energy saving and school movements.
5. Sustainable building and increasing biodiversity in school.
6. The promotion of health at school.
7. The rational management of natural resources.
8. From the local to the global scale.

These parameters of sustainable school are presented in next chapter (Figure 2).

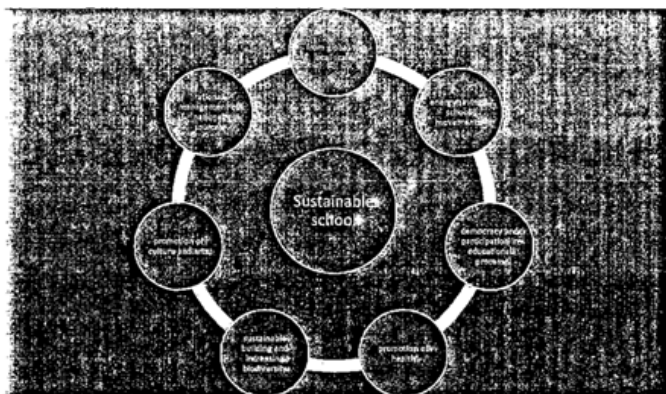


Figure 2 The parameters of sustainable school.

We must say that the improvement of the educational process can be succeeded, based on these parameters:

1. Connection with the local community.
2. By studying the real problems of modern world.
3. With the design of future scenario, based on alternative practices of developing.
4. The design and also the implementation of action plans in community and school.
5. The growth of education for sustainable development.

Also, the creation of sustainable school buildings will be promoted with these parameters, by giving emphasis on the educational process:

1. Design of outdoor lesson space.
2. Design of places for meeting and collaboration for pupils and teachers outside the classroom in corners that are unused to the common areas of the building and the courtyard.
3. Creation of thematic rooms using material produced by pupils.⁹

Except these, we can say that the most important practices in the effort to increase biodiversity at school are these:

1. Creation of barriers.
2. Creation of a green roof, as rooftop.
3. Creation of school garden and also vegetable garden.

In this way the transformation of the school building to sustainable building can be succeeded with these recommendations:

1. Improvement of thermal insulation of the building with the help of special engineers and also of application of small passive systems.
2. Study of rainwater utilization for watering the garden.⁹

Generally, we can say that sustainable school is based at these sectors, which are presented in next diagram (Figure 3).

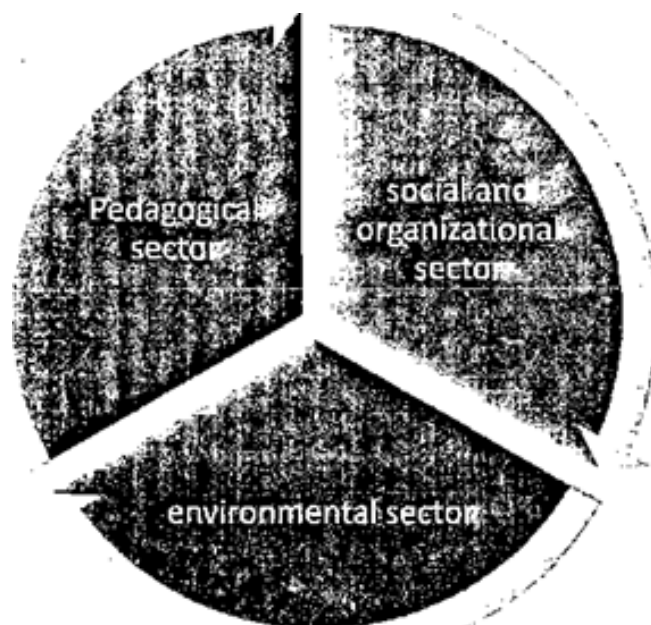


Figure 3 The sectors of sustainable school.

Based on the creation of sustainable schools in last year's many researchers have studied the role of sustainable schools and also their specific characteristics. In the research of Ribeiro & Ribeiro¹⁰ has been studied the operation of a sustainable school - village. This school - village considered needed in the effort to inhibit the degradation of forests and also to grow the involvement and the consciousness of modern people. That's why it is believed important the development of ecological consciousness, in an environment, where people can learn by practices.

For this reason they think important the creation of "a Sustainable Building Program (SBP) to build ecological school-villages surrounding the forest reserves subjected to constant aggressions".¹⁰ Especially, the researchers believe that this village must be developed in the Adolpho Ducke Forest Reserve, which must be protected, due to its specific characteristics. The development of ecological villages is considered very important, as they can shelter people, who can participate in social residential programs, by using green building techniques and by practicing environment education.

The role of sustainable schools

By evaluating the principles of sustainable education and sustainable schools, we can understand their role. This role is based on the creation of environmentally conscious citizens at global level, by giving them the needed organizational culture, physical place and educational program. Also, in these schools can be developed their creative thinking and also their sense of awareness and their responsibility, as they can operate as a source of inspiration. These students can be essentially developed in a sustainable and healthy environment.⁷

Also, in sustainable schools can be created a progressive and positive school culture. Except these, there are given more opportunities to students and teachers to row their productivity and participation and to develop their skills on critical thinking and problem solving. Many researchers also believe that sustainable schools can connect community engagement and environmental education. Their role is also important in the modernization of curricula, by giving emphasis on architectural education. In these curricula the main interest is given on:

1. Urbanism.
2. Engineering.
3. Urban design.
4. Urban and cultural heritage.
5. Opportunities of learning.
6. Urban and rural education.

Especially, with architectural education, is given emphasis on these parameters of modern societies:

1. Urban and non-urban environment.
2. Configuration of space.
3. Form of constructions.
4. Transformations of cities.

In this way are given the opportunities to create modern cities, which can meet the need of our era and the wills of modern citizens. The study and the evaluation of these data present the role of the sustainable school and that's why in next chapter with the use of the method of case study will be presented the development of sustainable school in Cyprus and especially in Nicosia.

Case study

The aims of the choice of this methodology

In this context, each researcher must systematically investigate the bibliographic review and proceed with the design of the methodological processing of the subject that concerns him. In addition, the correct choice of methodology is determined by the full understanding of the particularities of each subject and of the research goal, while the basic principles of conducting research are also considered to be important.¹¹

Proper planning and selection of the appropriate methodological approach to research is a key priority for its successful implementation. In most researches, researchers are asked to choose between quantitative and qualitative methods, differentiated by the way the research process is implemented, and using different research tools to achieve their goals. But in this research will be used the method of case study, as it is considered the most effective in the effort to meet the goals of this study and in the effort to understand and evaluate the role of sustainable school.

This research method gives the opportunity to examine with a multifaceted way different phenomena. With the case study are mentioned a small number of subjects or phenomena or aspects of a subject or problem or an individual case. It is generally belongs in qualitative research methods as it doesn't:

1. Claim generalization of its results.
2. Gather data from large or representative samples.
3. Try to involve numerous subjects.¹²

As it is mentioned a clear criterion for judging the value of a case study is the extent to which the details are adequate and appropriate so that a teacher working under similar circumstances can relate decision-making to what is described in the case study. The correlation of a case study is more important than its generalization.¹² Also, we can say that with this method, it is very important to systematically collect and evaluate different data but also to effectively study the relationships between the various variables.

In this study, the use of this research method focuses on the essential analysis and understanding of sustainable school with general characteristics, which is explored through a specific way of its manifestation. In this way, it is tried to achieve the detailed research of this type of modern school, so that it can be understood and evaluated its role.

The sustainable school of Nicosia

The operation of sustainable school of Nicosia

As it has been mentioned, the need of creation of sustainable schools is understood at global level. In this way, in Cyprus in last year's main interest has been developed for the sustainable education, as it is believed that this type of education can lead to the creation of citizens with critical thinking and ecological awareness. Especially, the sustainable education in Cyprus is considered an example of good global practice, although this education has been developed in other countries many years ago. In the promotion of these subjects' at all educational levels in a horizontal, single and interdisciplinary way responsible is the Pedagogical Institute.

The main activities of Pedagogical Institute are based on the development and the operation of the Network of Environmental Education Centers, which with multi-level and multi-faceted way can operate as complementary, supportive structures for schools in terms of the study of environmental issues and sustainable development. Also, its activities concern the preparation and the writing of the curricula for the Environmental Education, and of the Sustainable Development Program at all educational levels. Important are also considered the actions, which concern the:

1. The production of educational material on various topics such as production and consumption.
2. Sustainable tourism.
3. Rational waste management.
4. School counseling support for interventions and changes in school.
5. Means of transport.
6. Development of networks of cooperation with local authorities, public and private actors.
7. Urban and rural heritage.
8. Architectural education.
9. Engineering.
10. Cultural heritage.

In this way is very important the study of the operation of sustainable school of Nicosia, which proves the interest of Cyprus for sustainable education. This type of school can pass the boundaries of traditional knowledge and even its knowledge natural environment and is based on an interdisciplinary and holistic learning, which will promote the social, political and economic context of environment and sustainable issues and of issues of sustainable development. Are pedagogical level are promoted activities, which can:

1. Effort to transfer the learning process to community, in the effort to use all the sources outside the school.
2. Promotion of cooperative processes.
3. Implementation of educational techniques and pedagogical approaches.¹³

At social level, the interest is given on activities, like these:

1. Development of cooperation networks with the local community.
2. Creation of networks of communication and cooperation with other schools in the effort to organize joint actions.
3. Promotion to local community of the activities, which can be considered an example of good practice.
4. Effort to redefine its role in relation to society.

At organizational and artificial level, important are considered the activities, which concern the:

1. Refurbishment of school space and infrastructure.
2. Promotion of activities which can lead students to develop a sense of responsibility.¹³

Also, in this school are presented important changes in the philosophy of curricula, as its character is single and holistic. In this way, the new pedagogical programs can promote the engineering, the architectural education and give emphasis on the modernized way of the use of architectural principles and can help, finally the development of citizens with critical thinking.

Prospects of the operation of sustainable school of Nicosia for the future of the capital city of Cyprus

By studying the role of sustainable education and school, we can understand that this type of school is very important for the future of the capital city of Cyprus. Nicosia is one of the most important cities in Europe and that's why as capital must adapt the main principles of sustainable development. In this way, is believed that the operation of sustainable school of Nicosia can lead to its sustainable presence in future.

Based on the principles of architectural education and engineering, will be given emphasis on sustainable and ecological design, which can consider the residential complexes, buildings and free space as a unit that is directly related, affects and influenced by the climate of the place, based on the most important bioclimatic principles. In this way Nicosia in future will be designed, based on the principles of bioclimatic architecture. Also, in this type of school will be promoted the need to be improved the financial, social and environmental conditions, in the effort to improve the quality of life of its citizens. Generally, its design will be based on urban and rural heritage, on modern engineering and also on cultural heritage.

In this way, we can understand the importance of the development and the operation of the sustainable school in Cyprus, as it has

pedagogical and social role and can help to the sustainable development of Nicosia in the future and in the growth of sustainable policies.

Conclusions

In this study is presented and evaluated the role of sustainable education and school. In this way in sustainable school are used the principles of sustainability, in the effort to develop creative citizens. Sustainable school also uses flexible and open learning processes and is also based in the creation of horizontal communication networks. In this way teachers and students can participate more in the learning process, in school life and in the community, in the effort to improve the quality of their cities and of their lives. Also in this type of school learning isn't considered as information but as negotiation and communication. Except the changes in the context of learning are considered needed changes in the pedagogical process, structure and function of schools.

Generally, we can say that sustainable School seems a feasible vision and its basic idea of this type of school is the integration of the values and the idea of sustainability in every sector of its life and especially in these, which are mentioned in the second chapter:

1. Management of buildings.
2. School's relations with the school and the wider local community.
3. Learning process.
4. Traveling to and from the school.
5. Management of buildings.
6. Administration in the learning process.

The evaluation of the case of sustainable school in Nicosia proves that the creation of citizens with critical thinking and environmental awareness can be based on the modernization of curricula and the change of their philosophy. In this way will be given the opportunities to citizens of Nicosia a city, which will be based on the basic principles of sustainability. Nicosia can be an example for other cities in future in the effort to promote their urban and cultural heritage and to use the urban and rural education and also architectural education, so that they can meet the future needs.

In this way can be understood the interest in last year's in creation of sustainable schools, which are needed for the success of sustainability. Modern cities and nations must try to adapt the principle of sustainability and use architectural education, so that they grow the number of sustainable schools. Finally, this study gives the needed stimuli for further research of this study.

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Conflicts of interest

The author declares that there is no conflict of interest.

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