

BUILDING A LANDSCAPE EDUCATIONAL PROGRAM FOR THE NEEDS OF GREEK PRESCHOOL AND PRIMARY-SCHOOL CHILDREN: A METHODOLOGICAL APPROACH

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Abstract

Greece is generally considered to be one of the least landscape-conscious among European countries, in need of further and more concerted landscape education, starting with the most malleable younger ages. Addressing this need, the objective of this paper is to propose a comprehensive and interdisciplinary landscape education program for Kindergarten, first and sixth grade Greek primary school children. Building on existing theoretical and empirical knowledge and best practices from around the world, the paper presents the development of a methodological framework, responding to the particularities of our case study, while also being adaptable to different geographical-historical-cultural circumstances.

Based on primary data concerning the children's landscape perceptions, experiences, feelings and behaviors, collected through pupil and teacher questionnaires and pupil drawings, the proposed educational program engages the children in experiential and interactional educational activities, encompassing all cognitive-emotional-behavioral aspects of their relationship with the landscape, while promoting and highlighting the values of teamwork and cooperation.

Keywords: *landscape education, Greek schoolchildren, questionnaire research, educational program*

1. INTRODUCTION

The interdisciplinary focus of the paper lies at the interface of three scientific areas: Landscape, Education and Society, and for each of these areas, relevant fields are bibliographically explored. Landscape traditionally constitutes one of the main scientific areas of inquiry of the discipline of Geography. However, due to its multi-disciplinary nature, it also represents a major research area of various other disciplines, such as Landscape Architecture and all the design and planning sciences; Landscape Ecology and all relevant earth sciences; Landscape History and most other social scientific fields; as well as many the liberal arts and the

humanities.

The following diagram (Figure 1) shows the main three areas of inquiry constituting the basis upon which the present study is conducted, in the context of Geography.

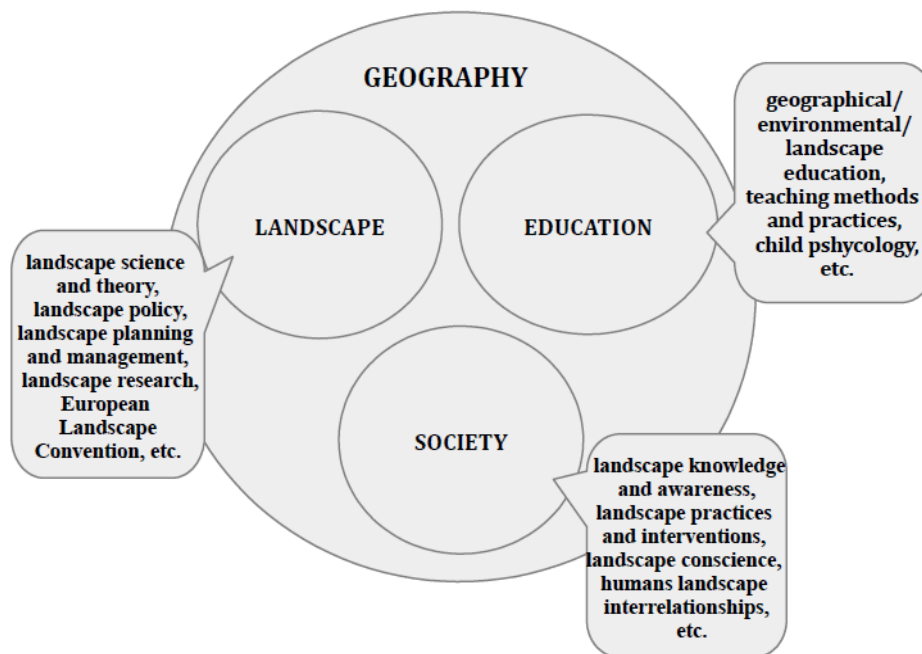


Figure 1. The scientific area of the study

The objective of this paper is to propose a comprehensive and interdisciplinary landscape education program for Kindergarten, first and sixth grade Greek primary school children. The proposed educational program is being designed in the context of a PhD dissertation that is conducted at the University of the Aegean, Department of Geography, Lesvos, Greece, under the title 'Design and evaluation through pilot implementation of a landscape education program for Greek preschool and primary-school children'.

Of course, in order to construct the proposed educational material on its proper basis, a thorough critical literature review in scientific fields related to the study was initially undertaken. The review includes all relevant and important information comprising all relevant material and best existing practices in landscape education, at national and international levels. It also aimed to spot existing deficiencies and gaps in the Greek educational system regarding landscape conscience and awareness, the coverage of which is aimed through the proposed educational program.

The next section of the paper regards the theoretical framework of the paper and relates to the term 'landscape', investigates the concepts of landscape perception and conscience and also, focus on these concepts and approaches in the case of Greece.

2. THEORETICAL FRAMEWORK

2.1 The term 'landscape'

At different times, different definitions of the term 'landscape' have been given by different

scientists of various disciplines and sectors (geographers, landscape architects, sociologists, planners etc.) reflecting, in this way, the particularity of the context in which this crucial (and basic for the implementation of the study) concept is approached. Nevertheless, each one of us perceives the landscape in a different way, as the same landscape may reflect different meanings and representations to different people or cultural contexts (Terkenli 2000: 63). This fact renders the term 'landscape' general and complex, as will be briefly illustrated next.

From the perspective of the discipline of Geography, landscape is traditionally understood as a visible expression of the human environment (Olwig, 1996; Meinig, 1979; Cosgrove, 1984). Terkenli (1996: 17) states that landscape is a general context of life delineated by the field of the human senses; more importantly, the landscape reveals the socio-economic conditions, the historical context and the cultural system which have created it, and reflects a series of different perspectives, through which it is perceived, articulated and acted upon.

Jackson (1984) claims that 'landscape is a composition of places created or modified by societies to be used as foundation or background to our collective existence' (Jackson 1984). In other words, according to Carl Sauer, the founder of the Landscape School of Geography in 1925 (Terkenli 1996), landscape represents a geographical means (a physical area), but it is also the result of human activity and cognitive processing.

According to the European Landscape Convention, 'landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (2000). Among other issues, the European Landscape Convention underlines the importance of people's landscape education and awareness.

As already mentioned above, different people may perceive the same area or landscape in different ways. It is scientifically accepted that a person's perception of what constitutes a landscape is greatly influenced by both personal/subjective (experiences with the family and the school, etc.) and cultural factors (established values and beliefs of a society, policies, traditions, etc.). Accordingly, Tuan (1979) claims, landscapes are real-world constructs that are perceived from different perspectives. These different perspectives and human-environments relationships come together in the concept of 'landscape conscience', which is defined as the mixture of perceptions, thoughts and emotions, presupposing the existence of an external world (Sutherland 1989). Terkenli further suggests that 'landscape conscience' refers to the distinctive bonds (conscious or subconscious) that characterize a person's or a people's relationship with their landscapes (Terkenli in Jones, 2011).

2.2 Landscape education

The literature investigation has shown that there are three main axes on which research concerning children ought to be based: the soul, the spirit and the body. More specifically, the soul axis includes the emotional processes, tendencies and reactions, psychology, prejudices, predispositions, the attitude and the mentality of a human being. Correspondingly, the spirit axis comprises cognitive and mental processes, perception, understanding, knowledge, external stimuli but also processing and responding to them. Finally, the body axis involves the physical and practical relationship, as well as the behavior and the practices that people display across the respective events. In general, the specific methodological approach that is adopted for the proposed research is based on the activation of the cognitive - emotional - behavioral aspects of the children who participate in the research process.

Landscape education is considered to have effective results when applying to preschool and primary school children, as children of these ages are notably malleable in terms of shaping perceptions and consciousness towards the landscape. This opinion is documented by a variety of scientists and experts on issues concerning children's behavior and education. In fact, Wilson (1996) suggests that children are able, even from a very early age, to participate in educational

processes targeting awareness raising towards the natural environment, and thus, also the landscape. Moreover, many of the attitudes and mentalities that prevail in our life as adults have their roots in our early childhood (Measham 2006; Bixler et al 2002). Furthermore, studies have shown that children at this age have the ability to absorb information very easily, as well as to become familiar with space and the objects in it and to perceive, mainly through personal experience, concepts generally related to space and the objects that form it, especially when teaching is supported by the use of tangible, visual and acoustic methods (Stoecklin 2001). What becomes apparent from the above statements is that children of these ages, through suitable guidance and education, are able to form their character and behavior towards various issues, as well as to adopt positive values and attitudes on issues such as proper and sustainable management of the environment and the landscape. In other words, children are capable of acquiring a landscape and environmental consciousness and becoming aware of the promotion, protection and sustainable planning and management of the landscape and environment.

2.3 The case study of Greece

Greece is generally characterized by rich landscape diversity which is shaped by a series of physical-geographical and human-geographical particularities, such as its geographical position, specific geomorphology, unique climate and vegetation, human economic activities, historical events, but also the degradation of its natural and urban landscapes, etc. Some of the main reasons for this degradation are: a lack of aesthetic and landscape education, uncontrolled urbanization outside town planning areas, unsustainable planning and construction practices, excessive and often illegal tourism/recreational development, inappropriate and out-of-scale spatial interventions through infrastructure construction (mainly road construction, irrigation, hydroelectric plants, etc.), negligence from the side of the authorities, etc.

Greece's problematic relationship with its landscape can be traced to a lack of a defined and well-developed landscape conscience in the country as compared to other modern (European or not) nation-states (Terkenli in Jones, 2011). Indeed, although national landscape initiatives in many European countries are relatively new and not yet fully implemented (Wascher 2001), Greece is in the unfortunate position of being far behind most other European countries in landscape protection, as in all landscape matters (Terkenli in Jones, 2011). If the European landscape is in crisis, the Greek landscape is – to put it mildly – in an even deeper, perhaps irreversible, crisis, in stark contrast to most other southern European countries of the Mediterranean (Grenon and Batisse 1989; Pettifer 1993; King et al. 1997; Höchtl et al 2007; Vogiatzakis et al. 2008).

In addition, Greece to date does not have a Landscape Department or Directorate at the Ministry, nor does it have landscape institutions at the regional and local level. In 2010, some signs of progress were noted, documented by ratifying the ELC of the country and the establishment of a Landscape Committee. Unfortunately, although the Committee still exists, its action and the adopted measures remain idle, mostly due to the fact that the priorities of the Greek state have changed during the recent years because of the socio- economic crisis that the country is going through.

With regard to Greek landscape education and science (Terkenli 2004), landscape education is still lacking at all levels of the educational system despite serious but rather sporadic and fragmented efforts in tertiary education institutions around the country. Addressing this gap, the objective of this study is the development of a comprehensive and interdisciplinary landscape education program for Greek Kindergarten, first grade and sixth grade primary school children.

There may be educational programs in Greece that are related to the landscape, however they refer mainly to landscapes of great value or specific beauty, whereas the proposed

educational program of the present paper regards all different types of landscapes, even the less beautiful and more ordinary ones, as well as the landscapes that we encounter in our everyday life. As far as Greek primary school courses are concerned, there are some references to the landscape, its various elements and people's relationship with it, etc., in the curricula of Geography and Environmental Studies. However, there is surely a need to further children's familiarization with landscape issues; one way this could be achieved is through experiential activities in the context of an educational program which builds on the curriculum program.

Greece is characterized by a lack of landscape conscience and awareness, mostly, due to historical events (e.g. wars) and socio-cultural factors. Greece never went through a Renaissance, a baroque phase or an industrial revolution as did most other European nations (Terkenli and Pavlis, 2012). Thus, Greece was never given the chance to go through any of the stages of landscape conscience formation as proposed by Cosgrove (1998) and Olwig (2001). But also, in the post-war period, upon becoming 'urban', Greeks lost their old connection with the land, nature and landscape. The rapid urbanization that took place, at that time, left too little space for Greeks to develop a landscape conscience and to adopt positive attitudes towards landscape issues (Terkenli and Pavlis, 2012). Even nowadays, though, Greek citizens remain cautious towards their governments' environmental protection legacy and exhibit irresponsible attitudes and behaviors towards their landscapes. Undeniably, these socio-cultural trends lead to a deficient landscape conscience and awareness in Greece. Pettifer (1993: 172) not only seems to argue that Greece never went through a fully-fledged industrial revolution, but also links this fact to the weakly developed environmental movements and environmental conscience: 'There has been no real industrial revolution in Greece and consequently no Romantic movement in literature to see nature threatened by man's activities' (Terkenli in Jones, 2011).

3. RESEARCH DESIGN AND METHODOLOGICAL APPROACH

Building on existing theoretical and empirical knowledge and best practices from around the world, the study develops a methodological framework, responding to the particularities of the Greek case; such a framework may also be adapted to different geographical-historical-cultural circumstances.

More specifically, based on primary data and on information concerning children's landscape perceptions, experiences, feelings and behaviors, the proposed educational program engages the children in interdisciplinary, experiential and interactional educational activities, encompassing all cognitive-emotional-behavioral aspects of their relationship with the landscape, while promoting and highlighting the values of teamwork and cooperation. Briefly, the implementation of the program consists of educational activities in the classroom and also evaluation of the efficiency of the educational program as well as evaluation of the program itself by the children. The activities of the educational program are described thoroughly in the following paragraphs.

Taking into consideration the pertinent scientific literature, regarding children's malleable behavior towards landscapes issues, the proposed program is designed to be applied to three different age groups of children: Kindergarten, first and sixth grade of Greek primary school. Children of the first two age groups are extremely malleable concerning landscape awareness and conscience raising, thus their behavior and values can easily change upon familiarization with the landscape, by adopting a sense of responsibility and positive attitudes towards the landscape itself and landscape issues, such as sustainable management, planning and protection. Children of the third age group are less culturally malleable regarding the development of a landscape conscience, as their behaviors are more crystallized—though they are still very receptive to awareness raising issues. Moreover, completing the sixth grade of

elementary school, pupils are ready to proceed further and move to the next level of education, secondary school. Therefore, it is of particular interest to investigate the extent to which the perception and attitudes towards the landscape of children of this age could change, so that children become sensitized and aware of issues concerning the landscape. In addition, it would be very interesting to compare the knowledge about and relationship with the landscape among the selected children of different age groups.

As already mentioned, the proposed program is designed to be applied to three different age groups of children: Kindergarten, first and sixth grade of Greek primary school. For the Kindergarten children, the proposed educational landscape program is limited to experiential and interactive activities and constructive games, whereas children in primary school are engaged in the same experiential, interactive and constructive educational tasks as above, with the difference that the teaching material is presented to them in both digital form and analog hardcopy.

The whole empirical implementation of the proposed educational program is based on the assumption that there are some parameters that could greatly influence the effectiveness of the program and need to be taken into consideration during the conduct of the educational process. Such important parameters are, for example, pupils' country of origin or their place of residence; the importance here lies in the fact that a child whose place of residence is in a rural area probably has very different experiences and ways of thinking regarding the landscape, as compared with a child who lives in a city center. Consequently, the results of the program are expected to vary according to the different places in which it is applied. Therefore, in order for the program to be more effective, it is necessary for it to be implemented in a sufficient number of schools, located in areas representative of these spatio-social differentiations (city - countryside), throughout the national territory.

More specifically, for each different landscape type/ category: urban or rural (mountainous, lowland and seaside), a representative region is selected for the program to be applied. Thus, in each of these regions, the research will take place in a public elementary school (the first and sixth grade) and in a public Kindergarten. It is important to mention that the program will be implemented only in public elementary schools and Kindergartens in order for the sample to be homogeneous and to avoid the specific conditions that might prevail in other types of school (e.g. private schools, full-day schools or other) that could alter the results of the investigation. The proposed educational program is planned to be applied in 9 Kindergartens and 10 primary schools (first and sixth grade) in total, in 9 different regions of Greece, during the spring of 2017.

Finally, before the conduct of the research and the implementation of the educational program, a special permission from the Greek Ministry of Education, Research and Religious Affairs is required and of course, the children's parents need to be informed and consent to the educational process in which the children will be engaged.

4. PRESENTATION OF THE PROPOSED EDUCATIONAL PROGRAM

In this section of the paper, the proposed educational program is presented and described regarding its structure, content and the way in which it is designed to be implemented. As already mentioned, the ultimate objective of the program is for the children to become acquainted with the landscape and its features, integrate it in their daily lives and, in general, to adopt a more positive, sensitive attitude and responsible behavior towards landscape issues, such as its protection and sustainable management. The pilot implementation of the proposed program consists of three stages, depicted diagrammatically in the following schema (Figure 2). The first stage comprises an introductory discussion and first acquaintance of the children with basic landscape concepts, through interviews with the use of questionnaires. The second

stage concerns the implementation of selected educational activities, in order for the children to begin thinking about the landscape, interact in it, and, generally, become familiarized with it in a multiplicity of ways, while the third stage relates to discussion with the children on a new basis, after the implementation of the educational program, in order to evaluate the effectiveness, accuracy and reliability of the program.

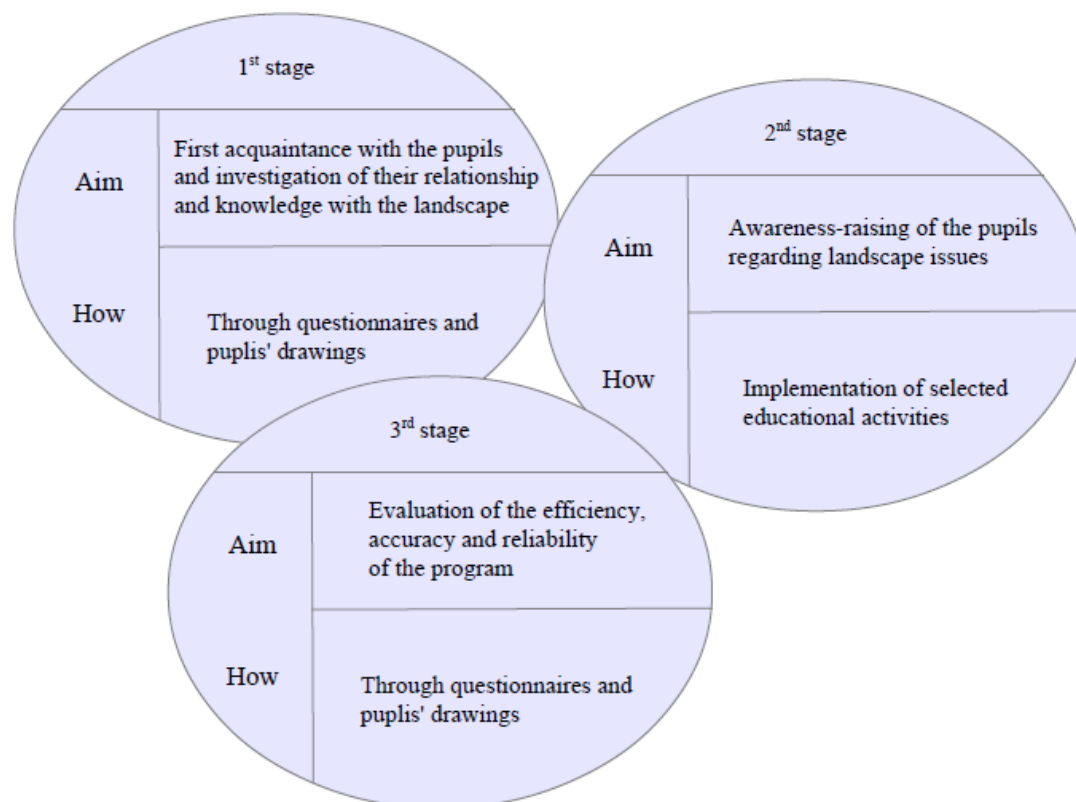


Figure 2. The three stages of the proposed program

4.1 The first stage of the educational program

More analytically, the first stage of the program relates to the acquisition of information and data relating to the cognitive and perceptual level of children regarding the landscape and their overall relationship with it (views, experiences, behaviors and feelings towards the landscape). The present research belongs to the field of qualitative research rather than quantitative as, according to Iosifides (2001), qualitative research aims at the description, analysis, interpretation and understanding of social phenomena, conditions and characteristics of social groups mainly seeking answers to the questions 'how' and 'why'. In order for a researcher to gain the appropriate answers and information, there are four different research tools (Chisnal 1986): the questionnaire, in-depth interviews, observation and experimentation. In the present research, the tool that has been chosen is the use of appropriately designed questionnaires. In this way, useful information is obtained, regarding the children's relationship with the landscape and how this evolves according to age, from preschool to sixth grade of primary school.

Through the questionnaire children will be asked (interviews) about their views, experiences, behaviors and feelings towards the landscape. Additionally to the questionnaire,

children will be asked to paint a landscape without any further guidance, in order to gain additional information on what the children assume that the landscape is, through the colors, shapes etc used, the different components and characteristics of the landscape that are depicted, and other features. For Kindergarten and first grade children, the answers will be recorded by the researcher, whereas for the sixth grade classes the answers will be written by the children on their own. Apart from the pupils, teachers will be also asked to complete a questionnaire, which contains information about the pupils' engagement with the landscape in the context of a class, as well as about the extent to which children are acquainted with new technologies (e.g. computer use). Besides some demographic questions, pupils and teachers will be asked the following questions:

Pupils' Questionnaire / Questions – Themes of Investigation

1. Please, draw a landscape.
2. What is there, (in the landscape) around your home?
3. What did you see at the place where you last went, or usually go to, on your holidays?
4. What do you think are the threats to a landscape?
5. Besides your home, school, and place(s) of holidays, where else do you spend your free time, and what do you do there?
6. What activities do you do, when you are on a holiday?
7. What do you like and dislike, at the places where you spend your free time outside your home, and at the place(s) of your holidays?
8. Which are your three most favorite landscapes and why?
9. Is there anything else you would like to add, about the landscape?

Teacher's Questionnaire / Questions – themes of investigation

1. Have you ever addressed the landscape, in any of one of your classes, and, if so, a) what have you said about it, and b) which activities have you engaged in?
2. At school, do you have computers for use by the pupils, and, if yes, what kind of activities do you usually engage in, with the aid of the computers?
3. Is there any particular class in which you use a computer, in the classroom, and, if yes, which one?
4. Does each child use a single computer, or do many children sit together, using one (in the latter case, how many children sit together, at the computer)?
5. Apart from computers, do you use any other technological educational tools in the classroom, and, if yes, which ones?
6. At which grade do children usually start using a computer, at school?
7. Is there anything else you would like to add, regarding the above?

In a few words, the questionnaire process will (1) lead to conclusions about the ways in which children of each age group see, perceive, understand, interpret and interact with the landscape and how these vary according to their age, from preschool to the sixth grade of primary school; (2) help identify their common perceptions, knowledge, behaviors and experience but also the differences, weaknesses, gaps and shortcomings, regarding the issue being investigated, taking into account different factors (place of residence, country of providence, cultural background, etc.); and (3) serve in creating a first understanding of how children in Greece relate and interact with the landscape.

4.2 The second stage of the educational program

The second stage of the program, includes selected educational activities in the framework of

a project, with the aim of giving the children the chance to confront landscape issues and, consequently, to start familiarizing and sensitizing themselves towards the landscape. More analytically, in the second stage, the children will be engaged in the following selected educational activities:

- an introductory video presentation (available at: <https://www.youtube.com/watch?v=HqKA-6zJY8c>) introducing the children to the subject, where images of different types of landscape (urban, seaside, agricultural, mountainous) are presented, explaining what landscape means, with simple but scientifically correct words,
- presentation of a series of images of different landscape types (urban, rural, seaside, mountainous) accompanied by an open-group in-class discussion, so that children understand that landscapes are not only beautiful areas or countryside, but all areas that we see and encounter in our everyday life,
- presentation of a series of images in which the concepts of landscape scale and perspective are presented in a clear and illustrative way,
- educational, interactive, experiential activities such as: improvisation, theatrical sketches and story-telling, organized by the children themselves, so that children interact and undertake roles related to the different elements of the landscape,
- puzzle constructions of various landscape images, which aid children in understanding that a landscape comprises of various different elements (natural, human, etc. and their interrelationships), together with open-group in-class discussion about these elements, while showing some relevant, corresponding images,
- chronological presentation of photographs of specific landscapes, showing how these have changed over the years, in order to draw conclusions about human intervention on the landscape,
- creation by the children, through paintings, of their ideal landscapes as they imagine them to be.

All these activities described above are undertaken in a context which fosters and promotes the values of teamwork and cooperation.

4.3 The third stage of the educational program

At the end of the educational activities as described above, the children will be asked to complete (third stage of the program), once again, a questionnaire which builds on the initial one (first stage of the program), but includes some additional questions evaluating the change in children's attitudes, opinions, values and behavior towards the landscape, after having participated in the educational program. Moreover, with the same questionnaire, the children will be asked to evaluate the educational program in which they just participated, so that the shortcomings and the disadvantages of the program may be revealed and amended.

5. DISCUSSION AND CONCLUSIONS

In this paper we explored landscape education and proposed an educational program aiming at raising landscape awareness of preschool and primary school children, in the case of Greece. It is worth mentioning, once again, that such a methodological approach to children's landscape education needs to be precisely based on the activation of the cognitive - emotional – behavioral aspects of the children participating in the research process. Moreover, children's interrelationships and interactions with the landscape are highly contingent on their social, cultural, political, economic, and environmental circumstances, as different educational programs implemented in different contexts (different cultural systems, countries, regions, etc.) yield highly variable outcomes (Rubenstein 2006). Furthermore, such an educational approach

was deemed necessary for Greece, on the basis of its lacking a developed landscape awareness and appropriate culture and education ('landscape conscience'), leading in problematic landscape planning, management and intervention initiatives—and was designed accordingly.

With reference to the above, the whole methodological approach, as well as the implementation of the proposed educational program is based on: 1. the student-centered pedagogical model, 2. the application of principles of collaborative learning, 3. the use of active and interactive learning processes, 4. the utilization of students' own [landscape] experiences, 5. the expression, formulation, argumentation and documentation of personal opinions and viewpoints or conclusions [about the landscape], 6. the use of audio-visual material (pictures, video, etc.), and 7. their [relevant] acquisition of knowledge from facts and phenomena of everyday life (Klonari et al., 2014: 85). In other words, in order for the desired learning outcomes to be manifested, cooperative teaching (teamwork), with the use of a variety of teaching methods (drawings, constructive educational games, role-play etc.) combined with an experiential approach is utilized.

The proposed educational program could be complementary to the curriculum of Environmental Studies in the first grade and, accordingly, to the curriculum of Geography in the sixth grade of primary school where, various environmentally-related subjects are taught, including social science and natural science.

The value and novelty of the proposed program lie in the combination of: a) gaining an understanding and insight into the development of Greek children's relationship with the landscape which, to our knowledge, has not been done so far, b) raising their landscape awareness, with the aid of the educational program, towards the long-term goal of informing a more sensitized society, while, in the meantime, c) fulfilling Greece's obligations towards the implementation of the European Landscape Convention.

As for the value of undertaking such research in the context of a school curriculum, the pertinent scientific bibliography recognizes and supports the value and importance of educational research, arguing that it contributes to the improvement of educational quality (Tuckman 1988, Hitchcock & Hughes 1995, Altricher et al., 2001). Furthermore, research findings emphasize the necessity of bridging educational research and school practice, in order to help teachers improve their educational work, while also promoting and highlighting the necessity for the development and cultivation of a research culture in schools (Goldstein 1998, Carpenter 2007).

Finally, due to the mostly indifferent, so far, attitude of Greeks -generally speaking- towards the protection and sustainable management of the landscape, children are expected to be little acquainted with landscape values and functions, a situation to the change of which the presented educational program aims to contribute. However, it is worth noting that, the implementation of the specific educational program in different context and circumstances (different countries, different regions within a country, etc.) is expected to provide different results, as children's relationships and interactions with the landscape depends on a series of respectively different cultural, political, economic, spatial, etc. conditions and circumstances.

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