

European SWOT Analysis on Education for Environmental Citizenship



Edited by
Andreas Ch. Hadjichambis, Pedro Reis & Demetra Paraskeva-Hadjichambi



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ENEC Cost Action Report

European SWOT Analysis on Education for Environmental Citizenship

Edited by

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List of Main Abbreviations

CE: Citizenship Education
CoP: Community of Practise
DSP: Dominant Social Paradigm
EA: Environmental Attitudes
EB: Environmental Behaviour
EC: Environmental Citizenship
ECn: Environmental Citizen
EE: Environmental Education
EEC: Education for Environmental Citizenship
EfS: Education for Sustainability
ESD: Education for Sustainable Development
FCN: Frequency of Contact with Nature
NC: National Curriculum
NEP: New Environmental Paradigm Scale
PSAs: Public Service Announcements
SE: Science Education
SSIBL: Socio-Scientific Inquiry-Based Learning
STEM: Science Technology Engineering & Mathematics
TPB: Theory of Planned Behaviour
TPD: Teacher Professional Development
VBN: Values Beliefs Norms

Foreword

Environmental citizenship is crucial for the success of any environmental policy. Sustainable development, a circular economy, a low-carbon economy, and a bio-economy require an effective citizen engagement. Citizens are called upon to adopt environmental attitudes and behaviours, make green choices, increase civic participation, and to be aware of and apply their environmental rights and duties. The contemporary environmental crisis with climate change, biodiversity loss, air pollution and all other local and global environmental problems demand an education that is capable of empowering environmental citizens. Education plays a key role in shaping future environmental citizens; nobody is born environmental citizen but anybody can become so by education.

This report presents a SWOT Analysis of an integrated and holistic type of education in Europe “Education for Environmental Citizenship”. The SWOT analysis is presented in two levels. In Part A a synthesis of the results of 157 experts from 28 European countries are presented. In Part B the reader can explore the 23 European country reports.

It is important to clarify that this research regarding SWOT analysis was undertaken before any development on the concept of Education for Environmental Citizenship such as common definition and the pedagogical approach. In this fact it illustrates the experts’ opinion in the different contexts through out Europe.

We hope that European stakeholders will find it useful.

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7. Education for Environmental Citizenship in Cyprus: A SWOT Analysis

Cyprus Country Report

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Abstract: This chapter attempts to consolidate the views of experts in the area of education for the environment in Cyprus, concerning the Strengths, Weakness, Opportunities and Threats (SWOT) of Education for Environmental Citizenship. Six participants – academics, researchers, teachers, Ministry of Education officers and NGOs, answered the structured questionnaire. Education for Environmental Citizenship is perceived to be advantageous (Strengths) in two main dimensions. The first refers to students' personal development contributing to the development of critical thinking, problem-solving and decision-making skills as well as in students' empowerment for civic participation, inter-generational justice and action competence in the public sphere. The second dimension includes the importance of methodologies adopted which are integrated in a holistic and comprehensive pedagogy. Weaknesses and areas for improvement include issues related to the novelty of Education for Environmental Citizenship, advocating the need for teachers' education and motivation, the development of learning materials and best practices as well as the mitigation of educational system's resistance to change. Education for Environmental Citizenship provides many Opportunities for promoting civic engagement through activities in local communities, enhancing NGO activities for non-formal education, advocating education policies on National and European levels, as well as the enabling of international networking. The main Threats related to Education for Environmental Citizenship are considered to be the lack of educational methodology and approaches, teacher-related aspects, learning materials, economic and infrastructure issues.

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7.1 Strengths of Education for Environmental Citizenship

For Strengths, a total of three questions pertaining to the Advantages of the Education for Environmental Citizenship: (1a), the characteristics of Education for Environmental Citizenship that do better (1b) against other relevant types of education (Environmental Education, Sustainable Development Education, Citizenship and Education for Natural Sciences) and the elements that constitute the uniqueness of Education for Environmental Citizenship (1c).

As for the advantages of Education for Environmental Citizenship, the majority of statements that have been recorded were related to the personal development of the students. According to the experts in Cyprus, Education for Environmental Citizenship can cultivate the participants' knowledge, values, beliefs, attitudes and pro-environmental behaviours. The advantages that have been recorded have made considerable references to the promotion by Education for Environmental Citizenship of civic participation, inter-generational justice, promotion of sustainability as well as the promotion of actions that are part of the public sphere.

In the second question on the Strengths of Education for Environmental Citizenship, concerning the characteristics of Education for Environmental Citizenship in which it prevails (1b) against other relevant types of education (Environmental Education (EE), Education for Sustainable Development (ESD), Citizenship Education (CE) and Science Education (SE)), the majority of statements recorded were referred to the educational outputs of Education for Environmental Citizenship, with a clear reference to civic participation. Also important are the references to the skills that students can acquire in this type of education, including participation and decision-making skills. In addition, reference to competences such as student empowerment, responsible citizenship, and environmental awareness, were recorded. Education for Environmental Citizenship educational approaches and methodologies related to real life environmental problems, as well as the fact that it is all other types of education together (all 4 in one) as a holistic approach, are considered as other Education for Environmental Citizenship characteristics which do better than the other types of Education.

In regards to the uniqueness of Education for Environmental Citizenship, reference is made once again to its holistic approach, stressing that it constitutes all other relevant four types of education together and that it is a real-life education with real problems and place-based education. Unique elements of Education for Environmental Citizenship are also considered to be the cultivation of students' empowerment and environmental awareness. Finally, the promotion of collective actions is considered to be another unique feature of Education for Environmental Citizenship by the Cypriot experts.

The main findings regarding the Strengths of Education for Environmental Citizenship are presented in Table 7.1.

Table 7.1 Strengths of Education for Environmental Citizenship

		Better than		
		Advantages	others	Uniqueness
		1a (%)	1b (%)	1c (%)
Educational Outcomes		26	30	30
Justice		4		
	Inter-generational justice	4		
Civic participation		14	24	22
Promotes sustainability		4	6	8
Outcomes general		4		
Educational methodologies/approaches		8	18	32
Real life education		8	6	16
	Real life problems		6	8
	Place based problems			8
	Real life engagement	8		
Holistic approach			12	16
	All 4 in one		6	8
	Science education perspective			8
	Moral and social issues		6	
Students' personal development		62	40	30
Knowledge		8		
	General knowledge	8		
Values		4		
Beliefs		4		
Attitudes		8	6	
Skills		34	16	
	Skills - critical thinking	8		
	Skills - problem solving	10		
	Skills - participation	8	6	
	Skills - decision making	8	10	
Competencies			18	30
	Empowerment of students		6	15
	Responsible citizen		6	
	Environmental awareness		6	15
Pro-environmental behaviour		4		
Actions		4	12	8
Collective actions				8
Public sphere		4	6	
Private sphere			6	

7.2 Weakness of Education for Environmental Citizenship

In terms of Weakness, three questions asked were: what are the weaknesses of the Education for Environmental Citizenship (2a), what can be improved in Education for Environmental Citizenship (2b), and what factors can eliminate the success of Education for Environmental Citizenship (2e).

Regarding the Weakness of Education for Environmental Citizenship, the majority of statements recorded were related to Education for Environmental Citizenship educational methodologies and approaches. Noted between the statements is the difficulty in achieving Education for Environmental Citizenship as well as the difficulty in assessing it. Among the weaknesses that have been recorded are issues relating to teacher education, the lack of learning material and the very novelty of Education for Environmental Citizenship as it is generally a new concept for the public. Finally, the potential resistance of the system to the adoption and establishment of Education for Environmental Citizenship was recorded.

Regarding the question of what can be improved and emphasised by Education for Environmental Citizenship (2b), most of them statements recorded were related to students' personal development issues. According to the experts, emphasis should be given to the skills of critical thinking, solution, problem, argumentation and working in groups. Also, attention needs to be given to students' competences so to empower them as citizens, as well as to their motivations and knowledge of environmental problems. The existence of results relating to real life, as well as the development of a healthy relationship with nature, were deemed to be very important. Finally, teacher education and continuity between the different levels of education were also noted.

The third question concerned factors that may eliminate the success of Education for Environmental Citizenship (2c). The experts have reported several statements related to Education for Environmental Citizenship educational methodology and approaches, such as the long duration it needs, its complexity, its open-endedness, the influence of and the effect on various community groups, and finally the overlap that may exist between Education for Environmental Citizenship and EE and ESD. The issue of teacher education and system resistance in Education for Environmental Citizenship was again reported.

The main findings regarding the Weakness of Education for Environmental Citizenship are presented in Table 7.2.

Table 7.2 Weakness of Education for Environmental Citizenship

	Weakness 2a (%)	Can be im- proved 2b (%)	Factors Eliminating Success 2e (%)
Educational Outcomes		14	
Real life outcomes		7	
Relationship with nature		7	
Educational methodologies/approaches	44	14	55
Educational Formality	11		
Non-Formal education	11		
Predetermined methodology	11		
Difficulty	22		
Difficult to be achieved	11		
Difficult to be assessed (the out-comes)	11		
Educational levels		7	
Continuity in the several educa-tional levels		7	
Political dimension of educa-tion		7	
Long-lasting implementation			11
Overlap with EE and ESD			11
Complexity			11
Open-ended nature			11
Affects several groups in com-munity			11
Students' personal development		55	
Knowledge		7	
Conceptual understanding of en-vironmental		7	
Skills		28	
Skills - critical thinking		7	
Skills - problem solving		7	
Skills - argumentation		7	
Skills - working in groups		7	
Competencies		20	
Empowerment of students		7	
Motivation		13	
Context	11		22
Educational system level	11		11
Resistance from the system	11		11
Collaboration networking			11
Educators issues	22	7	22
Lack Learning material issues	11	10	
Novelty of Education for Environmental Citizenship	11		

7.3 Opportunities of Education for Environmental Citizenship

Concerning Opportunities, two questions were analysed: good opportunities for promoting Environmental Citizenship Education (3a), and trends that can help Education for Environmental Citizenship (3b). The statements concerning opportunities of Education for Environmental Citizenship considered context issues.

Table 7.3 Opportunities for Education for Environmental Citizenship

		Opportunities 3a (%)	Trends 3b (%)
Context		100	100
Technology issues		30	33
	Technology platforms for discussion and interaction	10	11
	E-media provide opportunities for interaction	10	
	Social media provide opportunities for interaction	10	22
Society		30	11
	Local community activities for engaging citizens	10	
	Increase of NGO activities for non-formal education	10	11
	The society is ready for Education for Environmental Citizenship	10	
Educational trends and policies		20	22
	New formal education policies	10	
	National and European policies on Environmental Citizenship	10	
	Argumentation in science education		11
	Moral and ethical issues in education		11
Networking		10	33
	Promotion through European and Global networking	10	11
	Collaboration among schools		11
	Exchange of experiences		11
	Global networking		
Local issues to be solved		10	

The first question (3b) on good opportunities for Education for Environmental Citizenship raised issues relating to technology such as platforms to discuss relevant environmental issues, interactive platforms and social media. Also, several statements have been recorded around society where opportunities for activities in local communities promoting civic engagement, enhanced NGO activities for non-formal

education, and community readiness to accept Education for Environmental Citizenship are seen as opportunities. New education policies as well as national and European policies on Environmental Citizenship are considered by the experts as other opportunities for promoting Education for Environmental Citizenship. An opportunity is also envisaged for European and international networking.

The question of trends that may favour Education for Environmental Citizenship has again highlighted issues relating to technology and social media, the involvement and involvement of NGOs, a tendency for the consideration of moral and ethical issues in education, and the tendency to develop argumentation. Networking issues such as the co-operation between schools, and the exchange of experience and networking at an international level are also considered to be important.

The main findings regarding the Opportunities for Education for Environmental Citizenship are presented in Table 7.3.

7.4 Threats for Education for Environmental Citizenship

Regarding the Threats to Education for Environmental Citizenship, the experts' declarations were grouped in six main categories. Threats relating to the educational methodology and approaches of Education for Environmental Citizenship include: Context, teacher-related risks, learning materials, economic issues and infrastructure issues.

In particular, many of the risks recorded by the experts are related to Context. Risks are considered at the level of the education system, the possible resistance of the system to the adoption of Education for Environmental Citizenship as well as government policies. Deficiencies in technology and the socio-cultural level of citizens are also considered as risks to Education for Environmental Citizenship. Issues related to democracy such as centralized democracy, non-political citizens, and lack of citizen participation in decision-making were considered by experts as risks to the promotion of EE. Other significant risks considered were: the lack of teacher education for Education for Environmental Citizenship, the lack of relevant learning material, the lack of the necessary infrastructure and the lack of funding. Finally, breaking the limits of school could be considered as a threat according to the experts.

The main findings regarding the Threats for Education for Environmental Citizenship are presented in Table 7.4.

Table 7.4 Threats for Education for Environmental Citizenship

	Threats 4a (%)
Educational methodologies/approaches	6
Breaking the limits of school	6
Context	42
Educational system level	12
Resistance from the system	6
Government policy	6
Technology issues	6
Lack of technology	6
Society	6
Citizen's socio-cultural level	6
Democracy	18
Apolitical citizens	6
Lack of community participation in decision making	6
Centralised democracy	6
Educators' issues	23
Teacher education	23
Learning material issues	16
Lack of learning material	16
Economic and financial issues	13
Lack of funding	13

7.5 Formal and Non-Formal Education for Education for Environmental Citizenship

Experts were also asked about the differences that could exist between Formal and Non-Formal education when implementing Education for Environmental Citizenship. Their statements emphasised the importance of combining both Formal and Non-Formal education in the application of Education for Environmental Citizenship since Non-Formal learning can enrich formal learning, linking education to real life and real actions, and involving students as well and citizens. Formal education is seen as easier to implement since out-of-school activities have many difficulties in their implementation.

7.6 Primary and Secondary Education for Education for Environmental Citizenship

Between Primary and Secondary Education a number of differences were found including that secondary school students are more mature in accepting and acting

in the EEC, and that they have more skills and competencies associated with civic participation and action. In secondary education it is anticipated that there will be more difficulties with issues relating to the interdisciplinary approach of Education for Environmental Citizenship. Educational practices and approaches will not differ greatly between primary and secondary education, but there should be continuity between the different levels and a gradual increase in skills development through the transition from primary to secondary. Finally, an important record is the need to start the application of Education for Environmental Citizenship from early childhood.

7.7 Education for Environmental Citizenship and other relevant types of Education

Education for Environmental Citizenship can be seen by many as having some commonality with other relevant types of education, such as EE, ESD, CE, and SE. For this reason, the experts were asked to express their opinion in a quantitative manner on the degree of similarity between Education for Environmental Citizenship and the above-mentioned types of education. Figure 1 shows the overall assessment of the similarity of Education for Environmental Citizenship with the above education types on a scale of 1-5.

According to Figure 10.1, Cypriot experts consider that Education for Environmental Citizenship is not the same as EE, ESD SE and CE. There is more of a similarity between Education for Environmental Citizenship and ESD (mean = 4), followed by a similarity to CE (mean = 3.8), to EE (mean = 3) and to SE (MO = 4) (the least similarity).

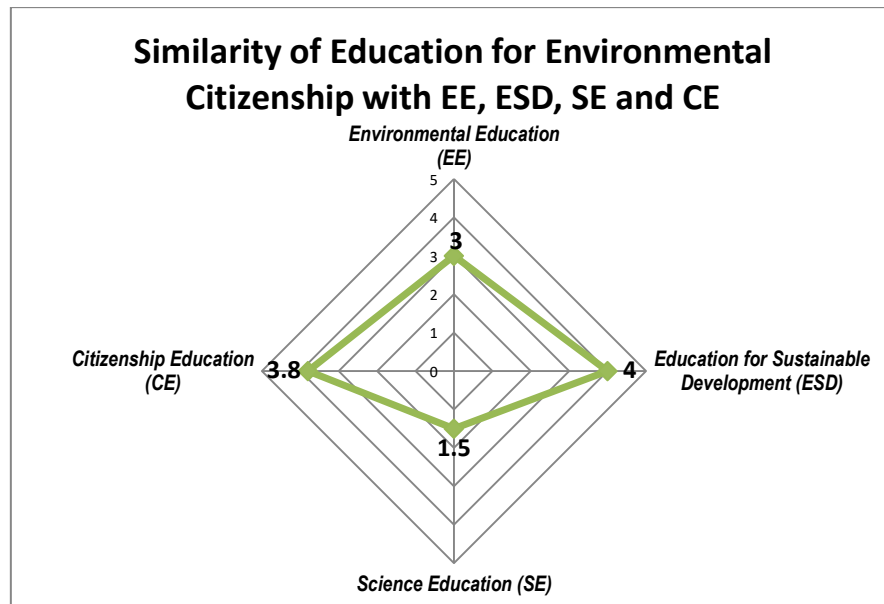


Fig. 7.1 Similarity of Education for Environmental Citizenship with EE, ESD, SE and CE

7.8 Conclusion

The results from the experts' views in Cyprus reinvigorate the need to better conceptualise Education for Environmental Citizenship. The emerged Strengths and Opportunities of that type of Education could have a considerable contribution to the sustainability of societies, since the students of today could become active and responsible citizens of tomorrow. Weaknesses, Obstacles and areas for improvement relating to the novelty of Education for Environmental Citizenship are advocating the need for teachers' education and motivation, the development of learning materials and best practices, as well as the mitigation of the educational system's resistance to change.

However, a reframing of the Educational policies at National and European levels is required in order to integrate the existing approaches of EE and ESD into a holistic and comprehensive pedagogy of Education for Environmental Citizenship and to build students' competencies for deep civic participation.

In conclusion, Education for Environmental Citizenship provides a more compelling framework empowering individuals to take part in the democratic processes needed to respond to the sustainability imperative.

7.9 References

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Environmental Citizenship has been an influential concept in many different arenas such as economy, policy, philosophy, organizational and corporation management and marketing and could be better exploited and established furthermore in the field of education as well.

This report examines the Strengths, Weaknesses, Opportunities and Threats of Education for Environmental Citizenship in Europe. In the first part of the report, the need for Education for Environmental Citizenship, is examined along with the methodology and results of an extensive research from more than 157 experts in 28 European countries and Israel. In the second part of the report, the country chapters for the 23 European countries and Israel emphasise the similarities, differences and special features of these case studies.

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