

# Education for Environmental Citizenship

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Environmental citizenship and environmental education are a particularly special field for the symbolic and practical clashes of competing ideas, interests, and organizations. Smederevac-Lalic et al. explain that formal, informal, and non-formal education are mediators of other types of knowledge and that the perceptions and interests of participants in the three organizational forms also express different intentions and aspirations.

Keywords: education ; environmental citizenship ; knowledge ; power relations ; cross-country comparison

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## 1. Introduction

The use of knowledge is a central issue in environmental discourse, highlighting whose knowledge determines the direction of environmental practices in education, policy decisions, local development, and the economy. The functioning of power is perhaps most clearly understood through the assertion of the types of knowledge that permeates all relevant components of environmental citizenship, from the formation of environmental education and attitudes to the details of resource allocation and practical activities. The detection and management of environmental hazards has always triggered the activities of groups of different actors who have had unequal access to the production, use, and validation of the necessary knowledge. Indigenous, tacit knowledge is mostly subordinated to environmental doctrines worked out and accepted in organizations. The mobilization capacity of NGOs and state or international bureaucratic institutions require a different kind of knowledge capital. Hadjichambis et al. <sup>[1]</sup> highlighted that key concepts and practices can affect a wide variety of scientific, advocacy, economic, and political arenas, just as green political thinking can be saturated with conflicting moral values <sup>[2]</sup>. The practice-oriented nature of intervention, prevention, and mobilization focuses on something other than the ethically determined values of autonomous provision and locality <sup>[3]</sup>.

## 2. Knowledge Use in Education for Environmental Citizenship

A summarizing study <sup>[4]</sup> clearly points out that environmental education is successful if it can combine the use of a wide variety of types of knowledge in specific organizational forms that “*assist in the application of environmental ethics in every human activity*” <sup>[4]</sup> (p. 80). Environmental knowledge is naturally interdisciplinary, and its utilization is beneficial if it incorporates the benefits of several types of knowledge.

Scientific knowledge is mainly explicit, well documented, institutionalized and sequential <sup>[5][6]</sup>. While scientific knowledge presents embracing theories and concepts, based on proven and excepted scholarly methods supported by a systematic collection of information from different localities and situations, local knowledge is specific, based on experiences and sometimes irregular observations. Scientific knowledge can be used locally if it is adjusted to the local environment and refined based on local experiences; thus local and scientific knowledge supplement each other. Local knowledge is most useful if it is combined with other knowledge forms, although it can be valuable in itself, such as, for example, when managing socio-ecological systems <sup>[7][8]</sup>.

As mentioned above, local knowledge is informal, simultaneous, often tacit, and based on experiences <sup>[5][6]</sup>. Local knowledge sometimes overlaps with traditional knowledge, although the dynamics of succession of these types is different <sup>[9]</sup>. In addition, the terms traditional ecological knowledge, indigenous knowledge or science, folk knowledge, farmers' knowledge, fishers' knowledge, and tacit knowledge shall be classified as local knowledge.

A third knowledge form defined in previous research on knowledge used in local development is managerial knowledge. Its emergence is linked to the project class phenomenon <sup>[10][11]</sup>. Managerial knowledge refers to financial and administrative knowledge, e.g., project writing and management skills <sup>[5]</sup>. According to the literature, managerial knowledge is explicit, specialised and learned in educational institutions. However, it can also be informal, experiential, and person-bound <sup>[5]</sup>. Although it has site-specific elements, it is always rooted in wider institutional and economic

environment. It plays an important role in the projectified society <sup>[11][12]</sup>; thus it became one of the most important forms of knowledge, and it is necessary to analyse it more deeply.

Citizen science has gained popularity, as it offers to close or at least tighten the gap between science and society <sup>[13]</sup>. It has various forms, from engaging individuals or communities to the whole process of knowledge production to using them as data sources. The analysis of education for environmental citizenship initiatives can be interesting from this point of view, because these could be built on local knowledge per se and also show the force of inclusion. Thus, it builds on an existing knowledge and provides a real world example of how a democratic process can evolve; this way power relations are also an important part of the analysis.

Knowledge use encompasses the bottom-up and participatory approach <sup>[4]</sup>, which, according to research experience, can be safely supplemented with top-down knowledge transfers. None of the ways of using knowledge takes place in a social vacuum; in practice, individual and institutional interests, as well as the operational rationality of projects and bureaus, mean that the moral commitments of the participants all affect environmental knowledge, modifying, strengthening, or even weakening its effectiveness.

Among the possible dimensions of research on knowledge use in environmental citizenship, the issue of power certainly has an important function. As the study of Levinson et al. <sup>[14]</sup> explains, the nature and intervention of political power can primarily influence the use of knowledge between human beings and the environment. As an example, the libertarian <sup>[15]</sup> and communitarian <sup>[16]</sup> orderly societies are mentioned, whose dominant ideological perspectives (referring to Dobson's <sup>[17]</sup> division of environmentalism versus ecologism) clearly determine the content of environmental citizenship. Political power can have strong control over the school system, which has a prominent role to play, but also over the definition of themes and values of out-of-school knowledge transfer, the formalization of education, and access to the necessary resources. The work of Levinson et al. <sup>[15]</sup> underscores the role of key players and, based on Johnson and Morris <sup>[18]</sup>, describes the ideal types of environment citizen as the personally responsible, participative, and socially responsible ideal types, not forgetting that not only individuals but also institutions, and above all the state, can also be key players. Csurgó et al. <sup>[19]</sup> recommend a *joint analysis of the use of knowledge types and power (project) networks for a more accurate interpretation*.

### 3. Conclusions

Among the drivers of environmental education, bottom-up NGOs or committed individuals play a particularly advanced role. In most cases, they are initiators and pioneers who are able to activate several types of knowledge, such as environmental systems knowledge, action-related knowledge, managerial knowledge, effectiveness knowledge, and above all, scientific knowledge. Compared to formal education, environmental education can apply hybrid types of knowledge, even if it is realized within the school system. The knowledge of activation, involvement, and persuasion is clearly a strength and advantage that is not present in other forms of education. An evolutionary approach is the key to the success of educational practices, nourished by scientific knowledge and always oriented toward rapidly changing practice.

In the activities of temporary organizations, or in the practices of school courses considered as additional subjects, the transfer of knowledge that accepts complexity and variability as a goal can necessarily conflict with the knowledge monopoly arising from the interests of bureaucratic organizations (e.g., school systems, project management). The novelty of our joint study of knowledge use and power relations highlights that, from an organizational point of view, without coordinating the activities of temporary organizations, volunteers, and bureaucratic organizations in new ways, the extension of the essence of environment citizenship can be damaged. The bureaucratic governmental, EU, educational, and project organizations mostly override and limit the benefits of bottom-up initiatives, the complex, flexible use of knowledge, and mobilization capacity. In sum, achieving environmental citizenship cannot be without coherence between the bottom-up and bureaucratic organizations.

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