



Proceeding Paper

Knowledge Use and Environmental Education in Hungarian School Gardens [†]

Imre Kovách ¹ and Boldizsár Megyesi ^{2,*}

¹ Institute of Sociology, Centre for Social Sciences, University of Debrecen, 4032 Debrecen, Hungary; kovach.imre@tk.mta.hu

² Institute of Sociology, Centre for Social Sciences, Hungarian Academy of Sciences, 1097 Budapest, Hungary

* Correspondence: megyesi.boldizsar@tk.mta.hu

† Presented at the 2nd International Conference of International Researchers of the Education for Environmental Citizenship 2022, 10–11 March 2022. Available online: <https://enec-cost.eu/ireec22/>.

Abstract: Environmental education, as defined by Hadjichambis et al., is effective when it combines knowledge types as well as organizational and management forms. Formal, informal and non-formal education are mediators of other types of knowledge, and participants have different perceptual interests and intentions and motivations. This paper focuses on an example of a non-formal environmental education form. It presents and analyses the types of knowledge and the motivations for their use in environmental education in Hungary in the example of school gardens.

Keywords: school garden; knowledge forms; power and knowledge; environmental education; motivations



Citation: Kovách, I.; Megyesi, B. Knowledge Use and Environmental Education in Hungarian School Gardens. *Environ. Sci. Proc.* **2022**, *14*, 14. <https://doi.org/10.3390/environsciproc2022014014>

Academic Editors: Pedro Reis, Marie-Christine Knippels, Audronė Telesiene, Daphne Goldman, Demetra Paraskeva-Hadjichambi, Jan Cincera and Kateřina Jančaříková

Published: 10 March 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Smederevac et al. [1] pointed out that environmental education, as defined by Hadjichambis et al. [2], is effective when it combines knowledge types as well as organizational and management forms, whereas formal, informal and non-formal education are mediators of other types of knowledge and participants have different perceptual interests and intentions and motivations.

This paper focuses on an example of a non-formal environmental education form. It presents and analyses the types of knowledge and the motivations for their use in environmental education in Hungary in the example of school gardens.

2. Methods and Materials

The paper is based on document analysis (policy documents, planning documents), of available data and semi-structured interviews, conducted with teachers responsible for school gardens, civic organizers of the School Garden movement and an additional interview with a representative of the public administration. The interviews were transcribed. We analysed the interviews using a semi-open-coded method to explore power relations and knowledge forms which influence the development of school gardens.

3. Results

The first part of this paper is about the theories of the types of knowledge [3] and the relationships between power and knowledge use [4]. The number of school gardens has grown steadily in recent decades, previously created and managed by enthusiastic teachers and their pedagogical allies following the ethos of scientific knowledge [5], with emphasis on the importance and pedagogical usefulness of traditional, local, tacit knowledge [6,7]. The School Garden movement was later founded, which is also supported by the President of the Republic's Blue Planet Foundation, the Ministry of Agriculture, and the Chamber of Agriculture, along with other organizations such as churches. Sponsors also provide

financial resources, and this has been accompanied by a gradual advance in managerial knowledge of the project class [8].

4. Discussion

The second part of this paper presents the case studies and the processes that are important for educating for environmental citizenship: through examples, children learn about environmental responsibility and healthy food, and show how the knowledge gained in SE classes can be turned into a real experience.

5. Conclusions

The third part of this paper concludes the analyses on forms of knowledge used in school garden practices, showing the direction in which this version of non-formal education has changed with the involvement of state, ministerial and foundation supporters, and the power and interest aspirations lined up alongside the original motivations.

Boldizsár Megyesi is supported by the Bolyai János Post-doctoral stipendium and the ÚNKP 2020-XX-5.

Author Contributions: Conceptualization, I.K. and B.M.; methodology, I.K. and B.M.; validation, I.K. and B.M.; formal analysis, I.K. and B.M.; investigation, I.K. and B.M.; resources, I.K. and B.M.; writing—original draft preparation, I.K. and B.M.; writing—review and editing, I.K. and B.M. All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Smederevac-Lalic, M.; Finger, D.; Kovách, I.; Lenhardt, M.; Petrovic, J.; Djikanovic, V.; Conti, D.; Boeve-de Pauw, J. Knowledge and Environmental Citizenship. In *Conceptualizing Environmental Citizenship for 21st Century Education*; Hadjichambis, A.C., Reis, P., Paraskeva-Hadjichambi, D., Činčera, J., Boeve-de Pauw, J., Gericke, N., Knippels, M.-C., Eds.; Springer International Publishing: Cham, Switzerland, 2020; pp. 69–82, ISBN 978-3-030-20249-1.
2. Lenhardt, M.; Smederevac-Lalic, M.; Radovic, V. *European SWOT Analysis on Education for Environmental Citizenship*; Hadjichambis, A.C., Reis, P., Paraskeva-Hadjichambi, D., Eds.; Short Country Report SERBIA; Intitute of Education, University of Lisbon: Lisbon, Portugal, 2019; pp. 246–260.
3. Bruckmeier, K.; Tovey, H. Knowledge in Sustainable Rural Development: From Forms of Knowledge to Knowledge Processes. *Sociol. Rural.* **2008**, *48*, 313–329. [[CrossRef](#)]
4. Csurgó, B.; Kovách, I.; Kučerová, E. Knowledge, Power and Sustainability in Contemporary Rural Europe. *Sociol. Rural.* **2008**, *48*, 292–312. [[CrossRef](#)]
5. Rahman, A. *Development of an Integrated Traditional and Scientific Knowledge Base: A Mechanism for Accessing, Benefit-Sharing and Documenting Traditional Knowledge for Sustainable*; UNCTAD: Geneva, Switzerland, 2000.
6. Folke, C. Traditional Knowledge in Social–Ecological Systems. *Ecol. Soc.* **2004**, *9*, 7. [[CrossRef](#)]
7. Janssen, M.A.; Anderies, J.M.; Ostrom, E. Robustness of Social-Ecological Systems to Spatial and Temporal Variability. *Soc. Nat. Resour.* **2007**, *20*, 307–322. [[CrossRef](#)]
8. Kovách, I.; Kučerová, E. The Project Class in Central Europe: The Czech and Hungarian Cases. *Sociol. Rural.* **2006**, *46*, 3–21. [[CrossRef](#)]