



Abstract

Environmental Citizenship of Dutch Lower Secondary Students [†]

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[†] 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/>.

Keywords: environmental citizenship; lower secondary level; students; interviews



Citation: van Harskamp, M.; Knippels, M.-C.P.J.; van Joolingen, W.R. Environmental Citizenship of Dutch Lower Secondary Students. *Environ. Sci. Proc.* **2022**, *14*, 2. <https://doi.org/10.3390/environsciproc2022014002>

Academic Editors: Andreas Ch. Hadjichambis, Pedro Reis, Audronė Telesiene, Daphne Goldman, Demetra Paraskeva-Hadjichambi, Jan Cincera and Kateřina Jančaříková

Published: 1 March 2022

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1. Rationale

To enable students to deal with sustainability issues, science education needs to provide tools to navigate sustainability issues, thus fostering Environmental Citizenship (EC). However, stimulating EC through science education remains challenging for science teachers. For instance, they experience challenges with guiding dialogue, and deem the curricula unsuitable [1]. Understanding current levels of EC among students would help science teachers in developing and teaching effective EC lessons. Currently, most of what we know about student EC is derived from large scale, quantitative studies. A more in-depth, qualitative view on student EC is desirable [2].

2. Key Objectives

In order to better support science teachers during education for EC, this study provides a qualitative view on the current level of EC of Dutch lower secondary students. The research question is: How can Dutch lower secondary students' EC be characterized? This characterization will be based on EC knowledge, attitudes, behaviours, and reflection, together forming student EC competence.

3. Research Design and Methodology

We conducted semi-structured interviews with 42 students (F: 25, M: 17; average age 13.3). Participants were interviewed at their own schools, which were selected to ensure geographical spread representing the urbanization level of the Netherlands (90.5% urban, 9.5% rural). Interviews lasted 11 minutes on average. The interview questions related to students' EC knowledge, attitudes, behaviour, and reflection. Interviews were audio recorded and transcribed verbatim. Transcripts were coded using open coding, and interrater agreement was calculated for 70% of the coded data (with ultimately 86.2% agreement between researchers, before discussion of coded data).

4. Findings and Conclusions

The data show that lower secondary students in the Netherlands have relatively narrow views of sustainability. They mainly relate it to sustainable energy use and recycling. About 90% of the students think about the future of the planet at least sometimes, with over half of them being worried. They fear for doom scenarios with mass extinction, hunger, pollution, and destruction of the planet. However, about half of the students notice sustainability issues close to home, whereas almost all of them think sustainability issues exist elsewhere. This means students feel distant in regard to sustainability issues. In contrast, students are interested in learning more about possible solutions that they can

implement themselves. Students do not discuss sustainability with friends, but about half of them discuss them at home or at school. They often adopt a form of EC that can be typified as personally responsible citizenship [3].

Author Contributions: Conceptualization, M.v.H., M.-C.P.J.K. and W.R.v.J.; methodology, M.v.H., M.-C.P.J.K. and W.R.v.J.; analysis, M.v.H. and M.-C.P.J.K.; writing—original draft preparation, M.v.H.; writing—review and editing, M.v.H., M.-C.P.J.K. and W.R.v.J.; visualization, M.v.H.; funding acquisition, M.v.H., M.-C.P.J.K. and W.R.v.J. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the NRO (Nationaal Regieorgaan Onderwijsonderzoek) under Grant number 40.5.18540.030.

Institutional Review Board Statement: This study was performed under ethical guidelines from the Faculty of Science from Utrecht University; explicit ethical review for this study was not mandatory.

Informed Consent Statement: Informed consent was obtained for all subjects involved in the study.

Data Availability Statement: Data sharing not applicable.

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

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