

# Susan Hanisch

## Dr. rer. nat.



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<http://openevo.eva.mpg.de>

## About me

I am an educational researcher interested in how the concepts, research questions, methods, and insights of evolutionary, behavioral, and sustainability sciences can be productively integrated in interdisciplinary curriculum development and school improvement efforts in K-12 and teacher education internationally.

Building on the approaches of design-based research, improvement science, and community science, I develop, implement, and evaluate teaching materials and teacher education interventions in collaboration with teacher educators, teachers, and students.

I am passionate about fostering in learners understandings and skills that enable them to relate to themselves, fellow humans and their socio-cultural and natural environment in helpful and meaningful ways. For this reason, I am particularly interested in the interdisciplinary fields of behavioral and evolutionary sciences and develop ways to make their concepts, insights, and methods accessible to teachers and students. My educational approaches center around deeper conceptual learning, experiential and active learning, as well as cooperative learning.

My academic career began in the fields of geography and agricultural sciences. After completing my doctoral thesis in tropical agriculture, I became increasingly interested in education for sustainable development and its role in a more sustainable future. I began my career switch by co-founding several educational projects, working as an independent lecturer, and developing a wide range of open educational resources on human evolution, behavior, and sustainability.

## Education & Training

### Dr. rer. nat. | 2015

University of Kassel, Germany

Dissertation topic: Improving cropping systems of semi-arid south-western Madagascar under multiple ecological and socio-economic constraints

Degree: cum laude

### M.Sc. International Organic Agriculture | 2010

University of Kassel, Germany

Thesis topic: Analysis of land use changes and structure of traditional Gayo coffee agroforestry systems in the Takengon region, Aceh Province, Indonesia

Final grade: 1.2

### B.Sc. Geography | 2007

Friedrich-Schiller-University of Jena, Germany

Thesis topic: Prognostische Simulation und Auswertung ausgesuchter klimatologischer und hydrologischer Parameter mit dem Modell J2000g und WETTREG-Klimadaten in Thüringen

Final grade: 1.2

Additional education and trainings

2024 Saxonian certificate of higher education didactics

2020 Learning Transfer Endorsed Educator Course














2019 Prosocial Facilitator Training

2016 E-learning manager course, Institute for Learning Systems, Hamburg, Germany

2001 Certified international tourism assistant

1999 Abitur (German high school diploma)

## Skills

|           |   |                    |   |
|-----------|---|--------------------|---|
| Moodle    |  | MS Office          |  |
| Wordpress |  | Google Docs        |  |
| Typo3     |  | MaxQDA             |  |
| Filmora   |  | SPSS               |  |
| NetLogo   |  | Orange data mining |  |
| H5P       |  | SoSci Surveys      |  |
| Airtable  |  |                    |   |

## Languages

German - Native

English - Fluent

French - intermediate

Spanish - intermediate

# Professional Experiences

**March 2022 - present**

**Researcher**

Research Group for Biology Education  
Institute for Zoology and Evolutionary Research  
Faculty of Biological Sciences  
Friedrich Schiller University Jena, Germany

**July 2020 - November 2024**

**Researcher**

Department of Primary School Science Education,  
Leipzig University, Germany

**November 2018 - July 2020**

**Independent lecturer**

**August 2018 - present**

Curriculum Designer  
EvoLeipzig e.V. ([www.evoleipzig.de](http://www.evoleipzig.de))

**June 2015 - Present**

Curriculum Designer  
Global ESD ([www.GlobalESD.org](http://www.GlobalESD.org))

**May 2015 - August 2015**

**Researcher (PostDoc)**

within the project SULAMA - Participatory research to support sustainable land management on the Mahafaly Plateau in south-western Madagascar,  
Department of Organic Plant Production and Agroecosystems Research in the Tropics and Subtropics,  
University of Kassel, Germany

**January 2011 - December 2014**

**Research assistant and doctoral candidate**

within the project SULAMA - Participatory research to support sustainable land management on the Mahafaly Plateau in south-western Madagascar,  
Department of Organic Plant Production and Agroecosystems Research in the Tropics and Subtropics,  
University of Kassel, Germany



## Relevant Academic Publications

- Hanisch, S.**, & Tempelmann, S. (2023). Menschliches Verhalten als Querschnittsthema in der BNE. *Journal für LehrerInnenbildung*, 23(3), 84–91. <https://doi.org/10.35468/jlb-03-2023-08>
- Hanisch, S.**, & Eirdosh, D. (2023). Developing Teacher Competencies for Teaching Evolution across the Primary School Curriculum: A Design Study of a Pre-Service Teacher Education Module. *Education Sciences*, 13(8), 797. <https://doi.org/10.3390/educsci13080797>
- Eirdosh, D., & **Hanisch, S.** (2023). A Community Science Model for Interdisciplinary Evolution Education and School Improvement. In A. du Crest, M. Valković, A. Ariew, H. Desmond, P. Huneman, & T. A. C. Reydon (Eds.), *Evolutionary Thinking Across Disciplines: Problems and Perspectives in Generalized Darwinism* (pp. 125–146). Springer International Publishing. [https://doi.org/10.1007/978-3-031-33358-3\\_7](https://doi.org/10.1007/978-3-031-33358-3_7)
- Hanisch, S.**, & Eirdosh, D. (2023). Teaching for the Interdisciplinary Understanding of Evolutionary Concepts. In A. du Crest, M. Valković, A. Ariew, H. Desmond, P. Huneman, & T. A. C. Reydon (Eds.), *Evolutionary Thinking Across Disciplines: Problems and Perspectives in Generalized Darwinism* (pp. 147–180). Springer International Publishing. [https://doi.org/10.1007/978-3-031-33358-3\\_8](https://doi.org/10.1007/978-3-031-33358-3_8)
- Hanisch, S.**, & Eirdosh, D. (2023). Behavioral Science and Education for Sustainable Development: Towards Metacognitive Competency. *Sustainability*, 15(9), 7413. <https://doi.org/10.3390/su15097413>
- Hanisch, S.**, Eirdosh, D., & Morgan, T. (2023). Evolving cooperation and sustainability for common pool resources. In X. Sá-Pinto, A. Beniermann, T. Børsen, M. Georgiou, A. Jeffries, P. Pessoa, et al. (Eds.), *Learning evolution through socioscientific issues* (pp. 127-147). Aveiro: UA Editora. <http://doi.org/10.17617/2.3486776>
- Hanisch, S.**, & Eirdosh, D. (2022). Cooperation as a causal factor in human evolution: a scientific clarification and analysis of German high school biology textbooks textbooks. *Journal of Biological Education*. <https://doi.org/10.1080/00219266.2021.2020875>
- Hanisch, S.**, & Eirdosh, D. (2021). Are Humans a Cooperative Species? Challenges & Opportunities for Teaching the Evolution of Human Prosociality. *The American Biology Teacher*, 83(6), 356–361. <https://doi.org/10.1525/abt.2021.83.6.356>
- Eirdosh, D., & **Hanisch, S.** (2021). Evolving Schools in a Post-pandemic Context. In W. Filho Leal (Ed.), *COVID-19: Paving the Way for a More Sustainable World* (pp. 465–480). Springer. [https://doi.org/10.1007/978-3-030-69284-1\\_24](https://doi.org/10.1007/978-3-030-69284-1_24)
- Hanisch, S.**, & Eirdosh, D. (2020). Educational potential of teaching evolution as an interdisciplinary science. *Evolution: Education and Outreach*, 13 (25). <https://doi.org/10.1186/s12052-020-00138-4>
- Eirdosh, D., & **Hanisch, S.** (2020). Can the science of Prosocial be a part of evolution education? *Evolution: Education and Outreach*, 13 (5). <https://doi.org/10.1186/s12052-020-00119-7>
- Hanisch, S.**, & Eirdosh, D. (2020). Causal Mapping as a Teaching Tool for Reflecting on Causation in Human Evolution. *Science & Education*. <https://doi.org/10.1007/s11191-020-00157-z>
- Hanisch, S.**, & Eirdosh, D. (2020). Conceptual clarification of evolution as an interdisciplinary science. *EdArXiv Preprints*. <https://doi.org/10.35542/osf.io/vr4t5>
- Hanisch, S.**, & Eirdosh, D. (2020). Challenges with conceptualizations of evolution in biology education. *EdArXiv Preprints*. <https://doi.org/10.35542/osf.io/2k9h3>
- Eirdosh, D. & **Hanisch, S.** (2019). The Role of Evolutionary Studies in Education for Sustainable Development. In: Wilson, D. S., Geher, G., Gallup, A. G., & Head, H. (Eds.). *Darwin's Roadmap to the Curriculum: Evolutionary Studies in Higher Education*. New York: Oxford University Press.

## Other Publications & Media

**Hanisch, S.**, & Eirdosh, D. (2024). A Teacher's Guide to Evolution, Behavior, and Sustainability Science. 3rd Edition. <https://openevo.eva.mpg.de/teachingbase/teachers-guide/>

Gachet, E., Porges, K., **Hanisch, S.**, Scheidemann, M. & Hoßfeld, U. (Hrsg.) (2023): Biologie und Bildung im Jenaer Modell. Ausgewählte Unterrichtsmaterialien. 5. Auflage. Jena: AG Biologiedidaktik.

Gatiso, T. T., Kulik, L., Bachmann, M., Bonn, A., Bösch, L., Eirdosh, D., Freytag, A., **Hanisch, S.**, Heurich, M., Sop, T., Wesche, K., Winter, M., & Kühl, H. S. (2022). Effectiveness of protected areas influenced by socio-economic context. Nature Sustainability. <https://doi.org/10.1038/s41893-022-00932-6>

**Hanisch, S.**, Eirdosh, D., Schäfer, M., & Haun, D. (2021). What Is "Fair" Is Not the Same Everywhere. Frontiers for Young Minds, 9. <https://doi.org/10.3389/frym.2021.580435>

**Hanisch, S.**, Eirdosh, D., & Atkins, P.W.B. (2020). Community Science Field Guide for School Culture: Tools for learning better, together. GlobalESD. <http://CommunityScience.GlobalESD.org>

### OpenEvo Project Website & Learning Hub

<http://openevo.eva.mpg.de>

<http://openevo-learninghub.eva.mpg.de>



OpenEvo Learning and Research Hubs provide access to open education resources, and tools for interdisciplinary educational innovation research within our *Educational Design Concept* and *Theory of School Improvement*.

As a co-founder of OpenEvo, I have helped lead this project conceptualization to its current state, with responsibilities including:

- Team management and partnership collaborations
- Theory and research methods development
- WordPress site management
- Moodle module development and implementation
- Content development and curation

## Grants and other funding successes

**Project “KliNaTrEm”** (Der Klimawandel als ein transdisziplinäres Handlungsfeld - Nachhaltigkeit und Empowerment in (der) Lehre und (im) Transfer)

June 2023 - May 2025

Funder: German ministry of environment

Funding amount: € 200,000

Roles: lead in the writing of the proposal; project leader

**Project “Developing a field approach to cultural evolution”**

March 2022-December 2024

Funder: John Templeton Foundation

Funding amount: US\$ 3 Mio

Roles: involved in drafting of the proposal; research coordinator in the schools thematic area

**Project “Amselo - Agent-based models of social-ecological systems with NetLogo”**

October 2022 - September 2024

Funder: Joachim Herz Stiftung

Funding amount: € 25,000

Role: writing of the proposal, project leader

## Guest positions, memberships & other roles

**since 2024**

Member of the *Verband Biologie, Biowissenschaften und Biomedizin (VBio)* (German Life Sciences Association)

**since 2023**

Behavioural Science Advisory Group member of the project “Facility for Action for Climate Empowerment to achieve Nationally Determined Contributions (FACE-NDC)” in Zambia, by Food and Agriculture Organization of the United Nations (FAO)

**since 2023**

Member of the *Verband zur Förderung des MINT-Unterrichts* (German association for the advancement of STEM education)

**since September 2019**

Guest scientist

Department of comparative cultural psychology,

Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

**since 2017**

Member of the Cultural Evolution Society

**since 2017**

Member of the Deutsche Gesellschaft für kontextuelle Verhaltenswissenschaften

**since 2016**

Member of the Association for Contextual Behavioral Science