



University of St.Gallen

Institute of Business Education
and Educational Management

Confessions of an Early Sustainability Educator: Autoethnographic Reflections on Myths in and About Sustainability Education in Higher Education

Dr. Stefan T. Siegel, University of St Gallen, Switzerland
Nairobi, Kenya

ICED24
Kenya

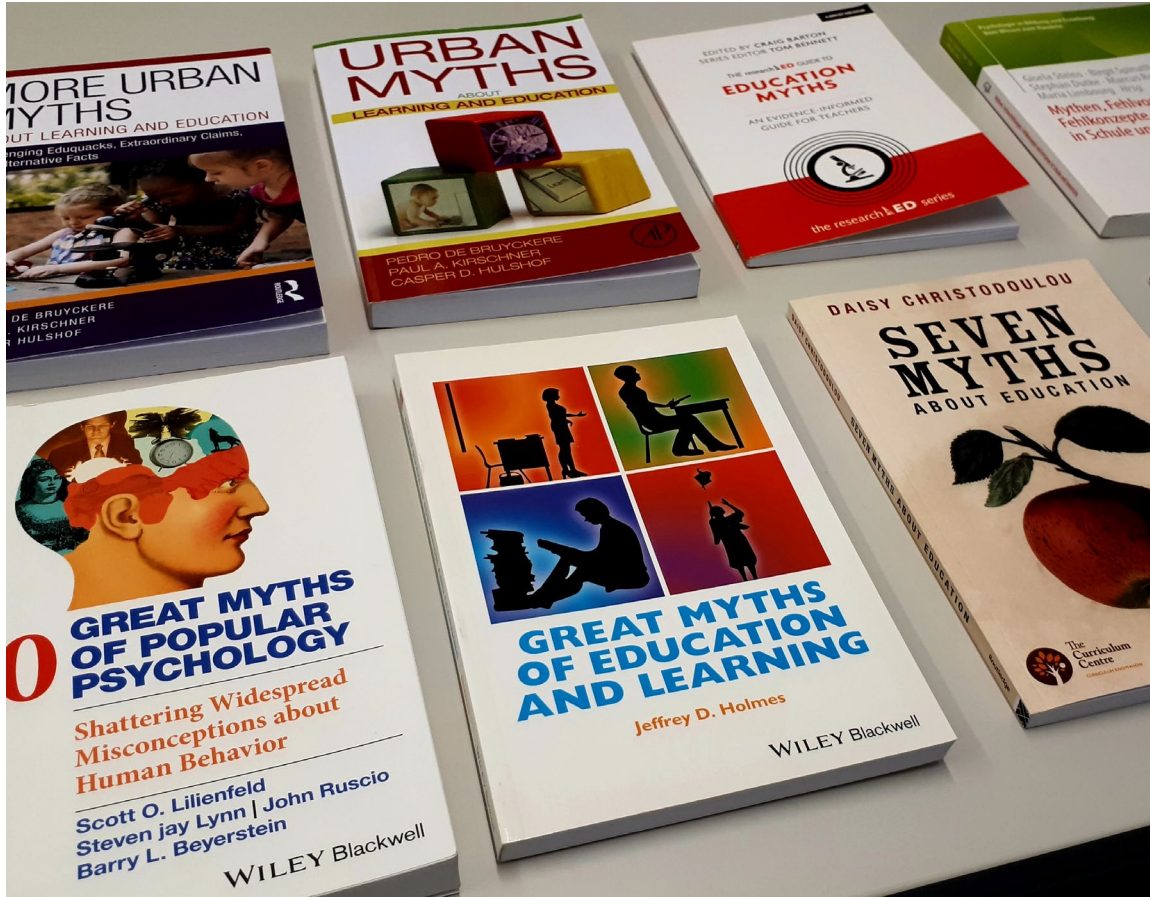


Agenda

1. Theory: Educational Myths and Sustainability Education as *Hot Topics*
2. Method: Reflexive Autoethnography
3. Results: A Closer Look at MYTHSE
4. Discussion: Strengths, Limitations & Future Research



1. Hot Topics: Educational Myths and Sustainability Education



(e.g., De Bruyckere et al., 2020; Lilienfeld et al., 2010; Siegel, 2024)



(e.g., Jones et al., 2010; Sterling, 2012; UNESCO, 2017)

What Are Myths in and About Sustainability Education?

Educational Myths

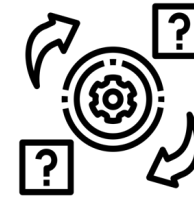
= „beliefs [about teaching and learning phenomena] that are held contrary to known evidence“ (Taylor & Kowalski, 2004, 15; Insertion St.S.)

Key Characteristics:

- Common and enduring beliefs
- Reasonable at first glance
- Not scientifically sound (e.g., Lilienfeld et al., 2010; Steins et al., 2021)

Sustainability Education

= a certain kind of education that ‘aims to foster competencies, which include attitudes, skills, and knowledge, among learners so that they can think integratively and responsibly and act for the benefit of our environment, society, and economy’ (Siegel & Dilger, 2023, translation)



Created by Nithinan Tatal



Created by Simon Child
from the Noun Project



Created by The Chonans
from Noun Project



Project MYTHSE

Identifying, Understanding, and Challenging Myths in and about Sustainability Education

Dr. Stefan T. Siegel, IWP-HSG

Background & Relevance

- **Relevance:** Growing importance of the hot topics: *sustainability education* (e.g., Jones et al., 2010) and *educational myths* (e.g., Christodoulou, 2014; de Bruyckere et al., 2020)
- **Research Gaps:** The field and phenomenon of myths in and about sustainability education (MYTHSE) remain largely unexplored with multiple research gaps (Miles, 2017) unaddressed (Siegel, i.p.)
- **Object of Research:** MYTHSE, i.e., a) misconceptions b) about teaching and learning phenomena concerning sustainability that are c) widespread, d) often persistent, however e) not backed by research and (scientific) evidence (Lilienfeld et al., 2010; Sinatra & Jacobson, 2019; Siegel, i.p.)
- **Examples:**
 - Sustainability (education) has nothing to do with me and my subject area (e.g., refutation by Sterling, 2012)
 - The higher educated people are, the more they act sustainably (e.g., refutations by Berry, 1987; Orr, 1994)

Overall Aims:

- Developing a research agenda (Zawacki-Richter & Anderson, 2014) with multiple studies for generating evidence on the field and phenomenon of MYTHSE
- Effectively address MYTHSE by identifying, understanding, and challenging questionable beliefs using evidence-informed protocols and tools
- Create an SE-Mythology, i.e., a collection of MYTHSE and their refutations (e.g., Lilienfeld et al., 2010)

"Science must begin with myths and with the criticism of myths"
(Popper, 1963, 63)

Identifying, Understanding, and Challenging (Potential) MYTHSE is Crucial for an Evidence-informed, Effective, and Ethically-responsible Sustainability Education



Studies of the Project MYTHSE

Study 1

- Preregistered scoping review to map, describe, and understand the field, identifying key publications, authors, and misconceptions.

Study 2

- Preregistered qualitative interviews with experts to explore the concept of MYTHSE and establish the research strand, including a podcast for data collection and analysis.

Study 3

- Development of a MYTHSE inventory through surveys with university instructors to assess psychometric properties and explore relationships with critical thinking and other relevant factors.

From Insight to Impact

- Establishing a new strand of research, providing insights into the landscape of educational myths in sustainability, and informing evidence-based practices for educators, researchers, and policymakers.
- Push the boundaries of theorizing (sustainability) education and expand educational myth research.

More Information



Selected References

- De Bruyckere, P., Kirschner, P. & Hulshof, C. (2020). *More Urban Myths About Learning and Education. Challenging Eduquacks, Extraordinary Claims, and Alternative Facts*. Routledge.
- Lilienfeld, S. O., Lynn, S. J., Ruscio, J., & Beyerstein, B. L. (2010). *50 great myths of popular psychology: Shattering widespread misconceptions about human behavior*. Wiley-Blackwell.
- Siegel, S. T. (2024). *Myths Debunked. Lehrblick – ZIWW Uni Regensburg*. <https://doi.org/10.5783/ZIWW.20240215.FN>
- Sinatra, G. M., & Jacobson, N. (2019). *Zombie Concepts in Education: Why They Won't Die and Why You Cannot Kill Them*. In P. Kendeou, D. H. Robinson, & M. T. McCracken (Eds.), *Misinformation and fake news in education* (pp. 7–27). Information Age Publishing, Inc.
- Sterling, P. S. (2012). *The Future Fit Framework. An introductory guide to teaching and learning for sustainability in HE*. https://www.sustainabilityexchange.ac.uk/files/future_fit_270412_1435.pdf

Kontakt

Dr. Stefan T. Siegel, stefan.siegel@unisg.ch
Institut für Wirtschaftspädagogik (IWP), HSG



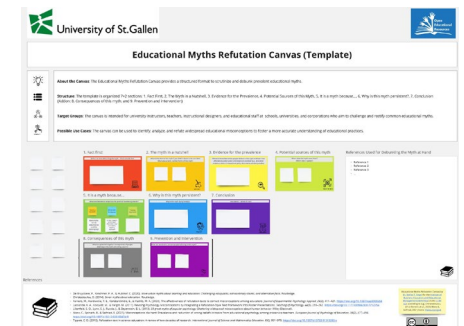
Universität St.Gallen

Methods

From insight to impact.

Method: Reflexive Autoethnography

- “is an **approach to research** and writing that seeks to **describe and systematically analyze** (graphy) **personal experience** (auto) in order **to understand cultural experience** (ethno)” (Ellis et al., 2010, Para 1; Highlights St.S.)
- **Reflexive Autoethnography** documents ways a researcher changes because of doing research (Ellis et al., 2010) – sometimes presented in the form of "confessional tales" (van Maanen, 1988; Anteliz et al., 2023)
 - **Reflective journal** since ~May 2022 with ~1050 notes (textual but also multimedia data (Chang et al., 2008, p. 72) related to MYTHSE using the “tool for thought” (Siegel & Lohner, 2024) obsidian.md for data collection, and organization
 - [Education Myth Refutation Canvas](#) (Siegel, 2024) for identifying, understanding, and debunking specific MYTHSE





The Four Lenses of Critical Reflection



Autobiographical
Our autobiographics as learners



Students
Our student's eyes



Colleagues
Our colleagues's experiences



Literature
Theoretical literature





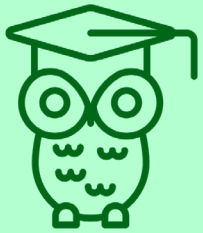
Universität St.Gallen

Results

From insight to impact.

Three Selected (Potential) MYTHSE

‘The higher educated people are, the more they think and act sustainably’



Created by VectorLab

‘Sustainability education is mere environmental education’



Created by AB Designs
from Noun Project

‘Sustainability is just another issue to be added to an overcrowded curriculum’



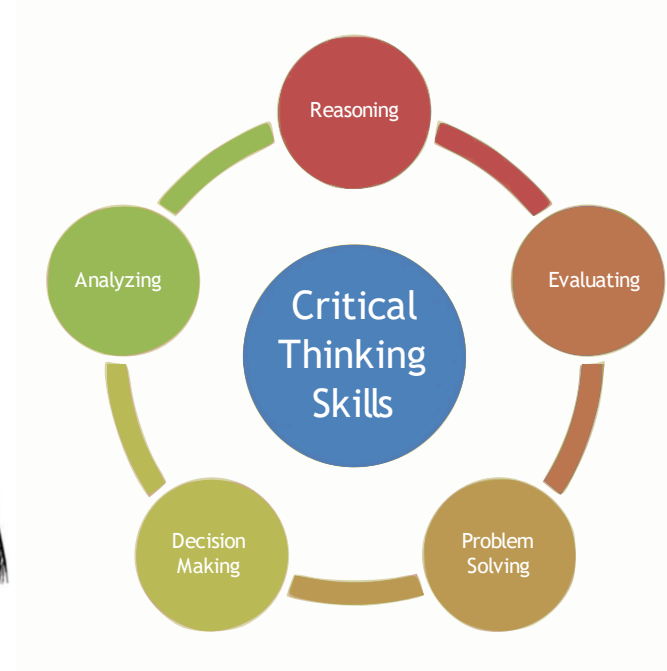
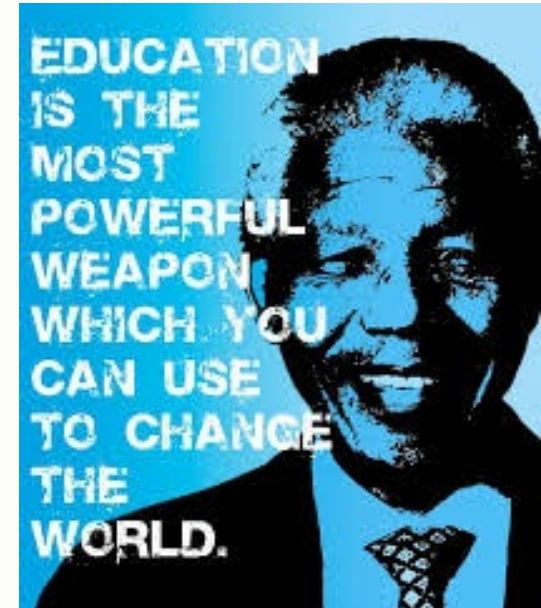
Created by Gan Khoon Lay
from Noun Project

Questionable Belief: 'The Higher Educated People are, the More They Think and Act Sustainably'



Created by VectorsLab

The depletion and pollution of our planet «is not the work of ignorant people. Rather it is largely the result of work by people with BAs, BSs, LLBs, MBAs and PhDs» (Orr, 1994, 7)

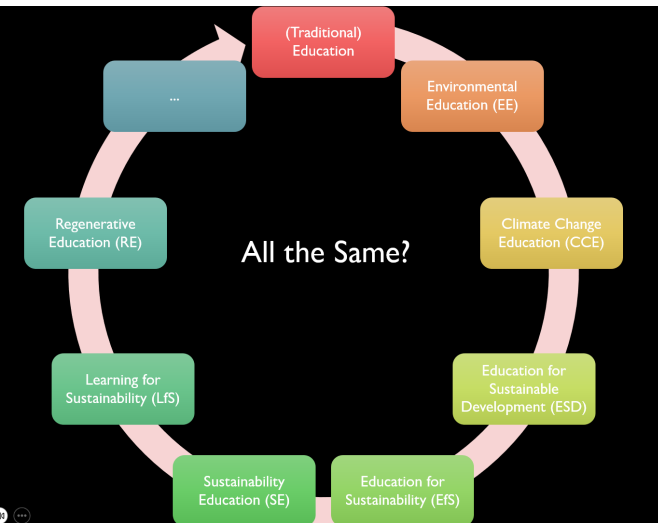


(e.g., Orr, 1994; Kahneman, 2011; Scriven & Paul, 1987)

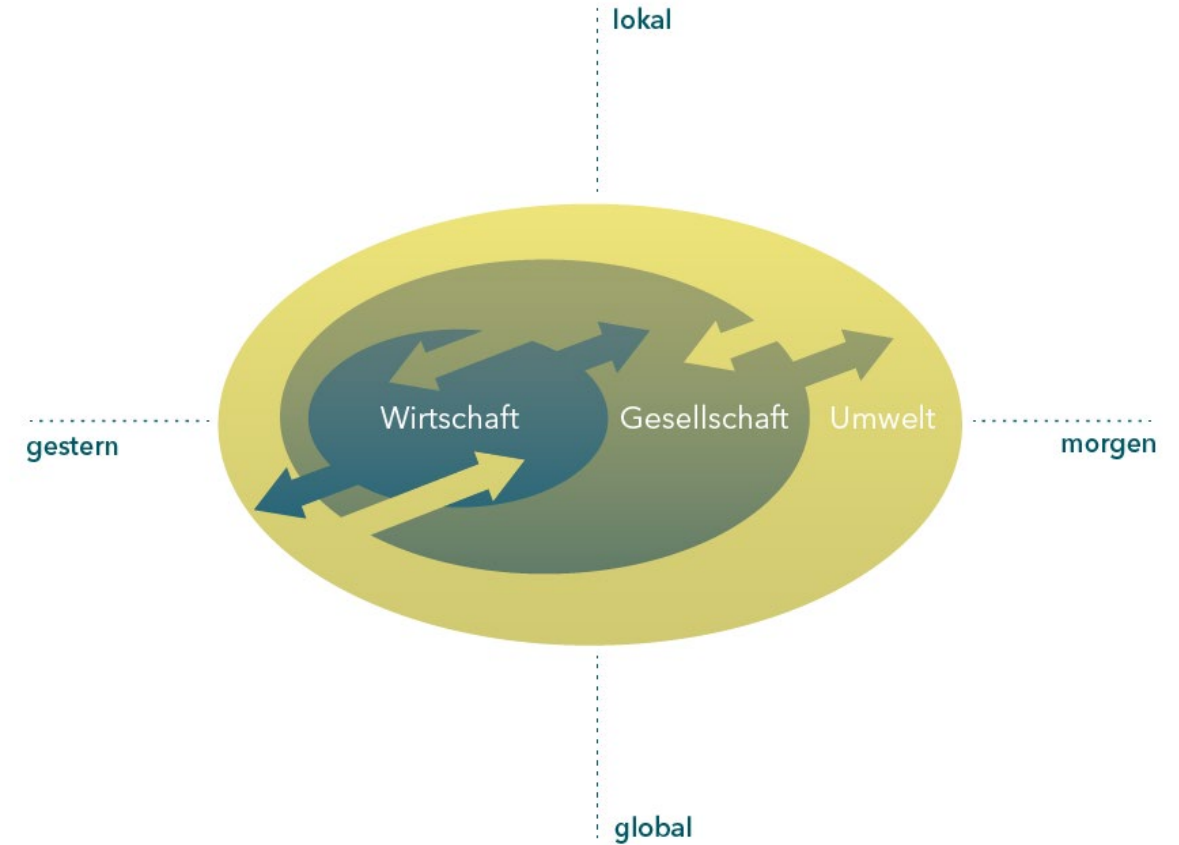
Questionable Belief: 'Sustainability Education is Mere Environmental Education'



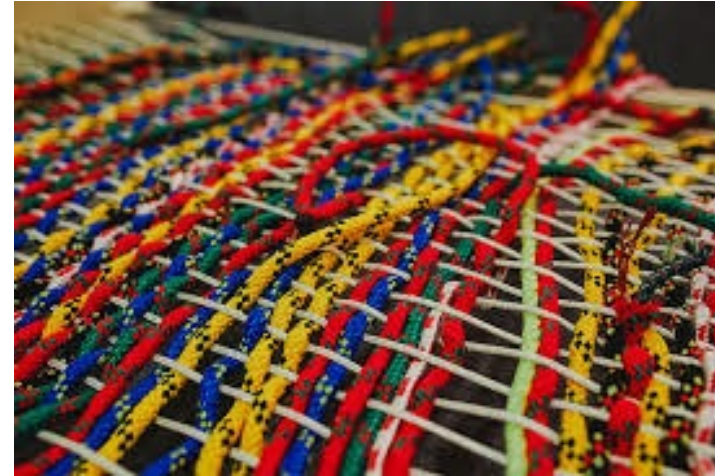
Created by AB Designs
from Noun Project



Created by Luis Prado
from Noun Project



Questionable Belief: 'Sustainability is Just Another Issue to be Added to an Overcrowded Curriculum'



‘The higher educated people are, the more they think and act sustainably’



Created by VectorsLab

‘Sustainability education is mere environmental education’



Created by AB Designs from Noun Project

‘Sustainability is just another issue to be added to an overcrowded curriculum’



Created by Gan Khoun Lay from Noun Project

‘Sustainability Education is about teaching someone sustainable, i.e., “the right” values, attitudes, knowledge, and behavior’

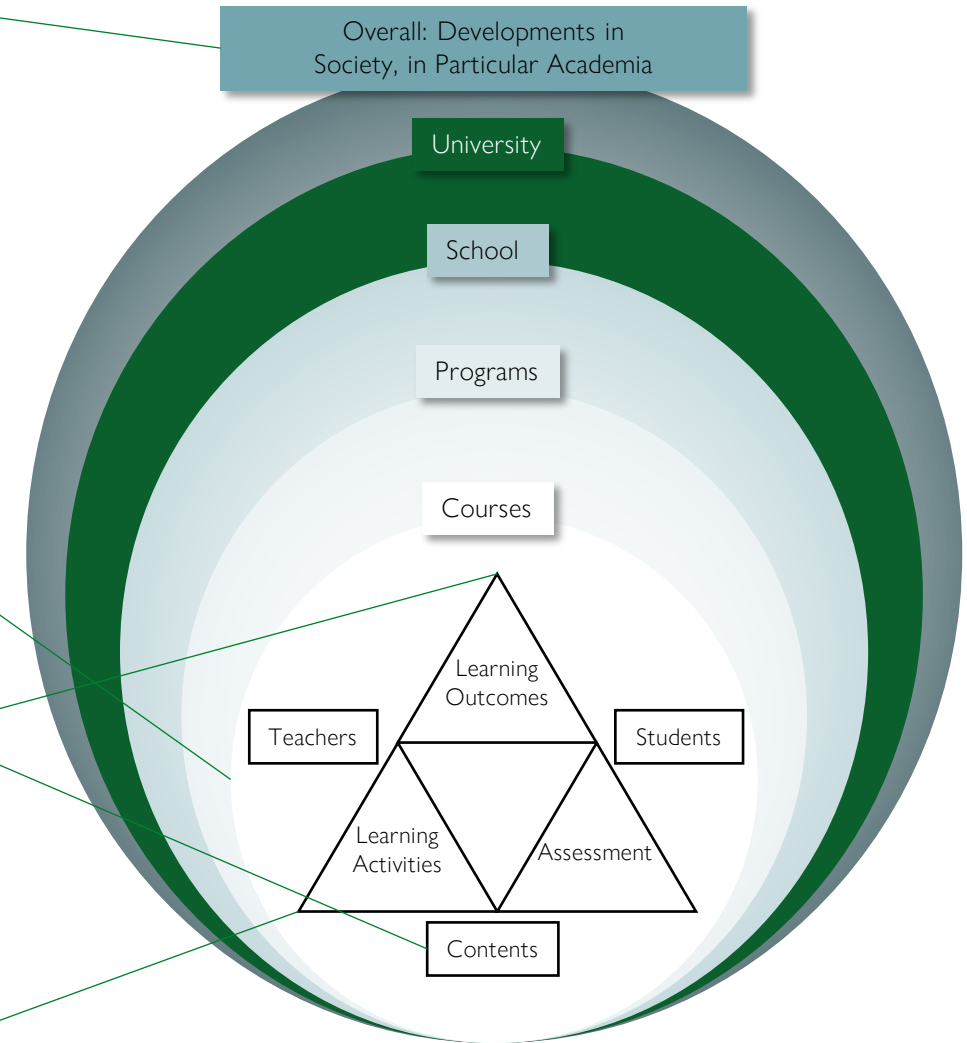


Created by Adrien Coguet from Noun Project

‘Direct Instruction is inferior to active and experience-based methods in sustainability education’

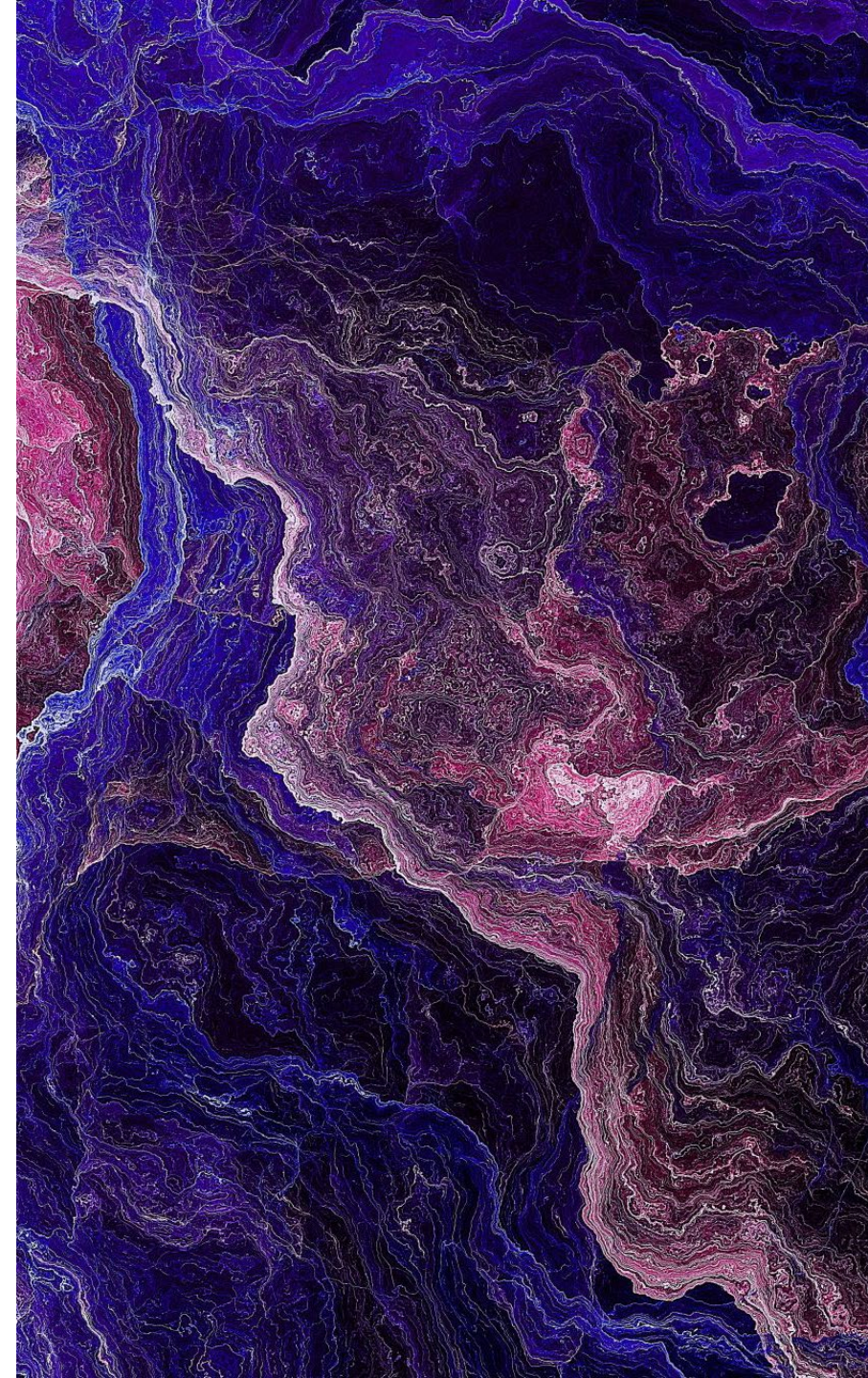


Created by Shakesh Oh from Noun Project



Discussion

From insight to impact.



Discussion: Strengths, Limitations, and Future Research

Strengths

- Strong connex of educational research and practice (,oscillation‘) and openly subjective voice (Reinmann & Schmohl, 2016)
- Findings are based on multiple evidences aka lenses (Brookfield, 2017) / reflexivity (Nagel, 1986)
- Evidence-informed and structured approach to identifying, analyzing, debunking MYTHSE (e.g., refutation canvas; Siegel, 2024)

Limitations

- ‘Autoethnography is both process and product’ (Ellis at al., 2010, para. 1): Findings are based on subjective and selective collection of critical incidents / documents (Adams et al., 2020)
- Depended on metacognition, memory

Future Research

- MYTHSE: Mapping a Complex, Evolving, and Undertheorized Field - A Scoping Review (preregistered study, in progress)
- Exploring Experts’ Perspectives on the Field and Phenomenon of MYTHSE: A Problem-centered, Podcast-based Interview Study (preregisterd study, in progress)

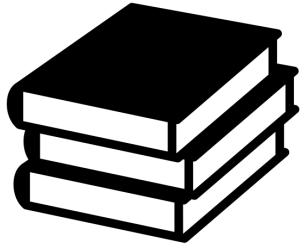


EITHER IT IS A MYTH OR A FACT

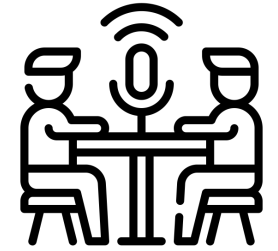


ONLY A SITH DEALS IN ABSOLUTES!

For More Information Visit: Evidence-informed Sustainability Education (EvSusEd)



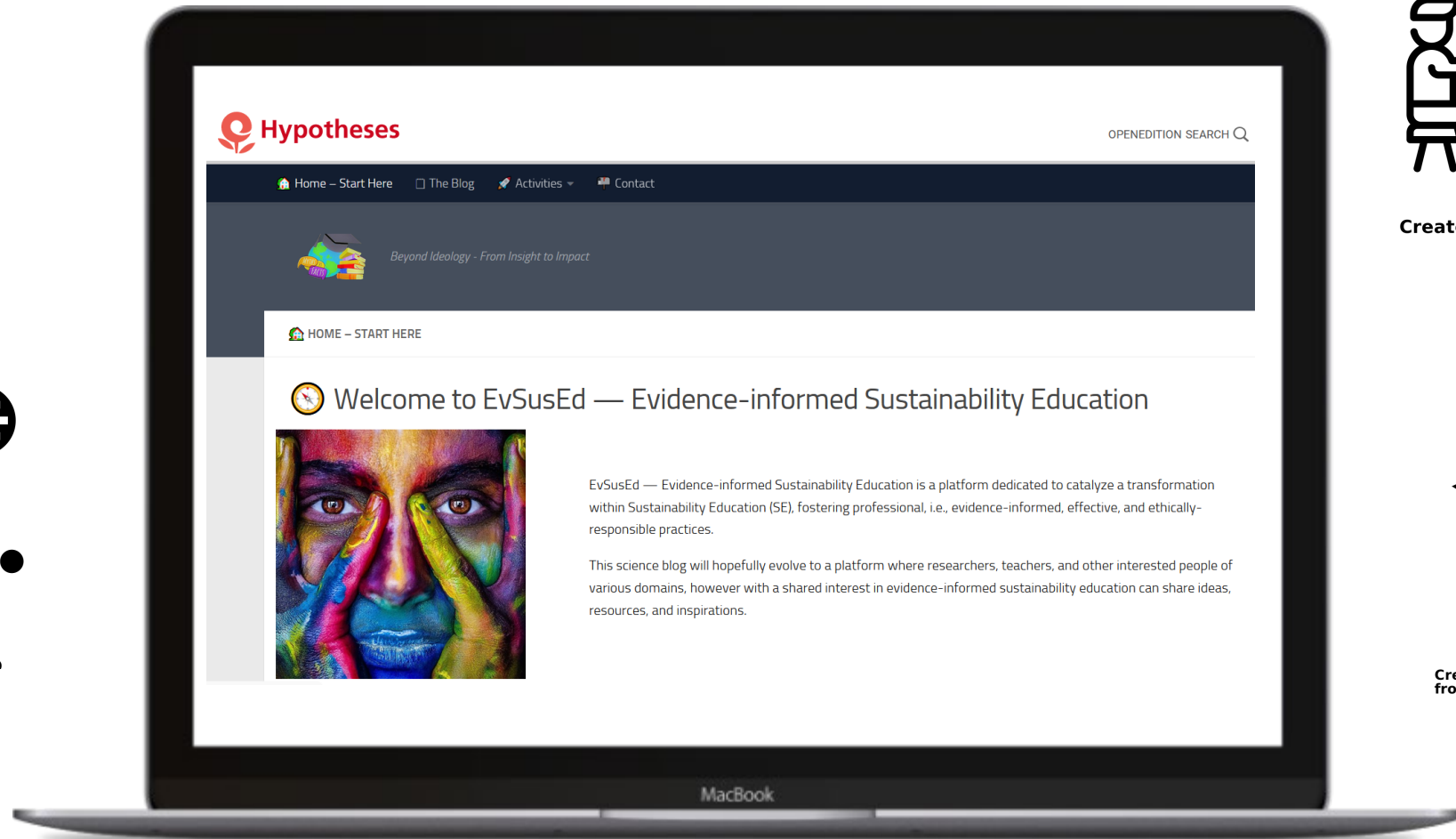
Created by Eucalvn



Created by Nawicon



Created by Creative Mania
from the Noun Project



References (Selection)



- Anteliz, E. A., Mulligan, D. L., & Danaher, P. A. (Eds.). (2023). *The Routledge international handbook of autoethnography in educational research*. Routledge.
- Biggs, J. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1, 5–22.
- Brookfield, S. (2017). *Becoming a critically reflective teacher*. Jossey-Bass.
- Chang, H. (2008). *Autoethnography as method*. Routledge.
- De Bruyckere, P., Kirschner, P. A., & Hulshof, C. (2020). *More urban myths about learning and education: Challenging eduquacks, extraordinary claims, and alternative facts*. Routledge.
- Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An Overview. *Forum Qualitative Sozialforschung Forum: Qualitative Social Research*, 12(1). <https://doi.org/10.17169/fqs-12.1.1589>.
- Lewandowsky, S., Cook, J., Ecker, U. K. H., Albarracín, D., Amazeen, M. A., Kendeou, P., Lombardi, D., Newman, E. J., Pennycook, G., Porter, E. Rand, D. G., Rapp, D. N., Reifler, J., Roozenbeek, J., Schmid, P., Seifert, C. M., Sinatra, G. M., Swire-Thompson, B., van der Linden, S., Vraga, E. K., Wood, T. J., Zaragoza, M. S. (2020). *The Debunking Handbook 2020*. <https://doi.org/10.17910/b7.1182>
- Mazur, E. (2009). Farewell, Lecture? *Science*, 323(5910), 50–51.
- Nagel T. (1986). *The view from nowhere*. New York: Oxford University Press.
- Jones, P., Selby, D., & Sterling, S. (Eds.). (2010). *Sustainability education: Perspectives and practice across higher education*. Earthscan.
- Siegel, S. T. (2024b). Educational Myths Debunked. *Lehrblick – ZHW Uni Regensburg*. <https://doi.org/10.5283/ZHW.20240215.EN>
- Sterling, P. S. (2012). *The Future Fit Framework. An introductory guide to teaching and learning for sustainability in HE*. https://www.sustainabilityexchange.ac.uk/files/future_fit_270412_1435.pdf
- Vosniadou S. (2013). Conceptual change in learning and instruction: The framework theory approach. In S. Vosniadou (Ed.), *International Handbook of Research on Conceptual Change* (11-31). Routledge.



University of St.Gallen

Institute of Business Education
and Educational Management

Dufourstr. 40a
9000 St Gallen, Switzerland

Unless otherwise stated, this work is licensed under [CC BY-SA 4.0](#); [Dr. Stefan T. Siegel](#) / [IWP-HSG](#).

Trademarks, logos, screenshots and some graphics and icons are excluded; the free license does not extend to them.



Dr. Stefan T. Siegel

✉ stefan.siegel@unisg.ch

📱 +41 71 224 75 91

📧 [@StefanTSiegel@bildung.social](https://www.bildung.social/@StefanTSiegel)