

How does Forest Pedagogy contribute to Education for Sustainable Development (ESD)?

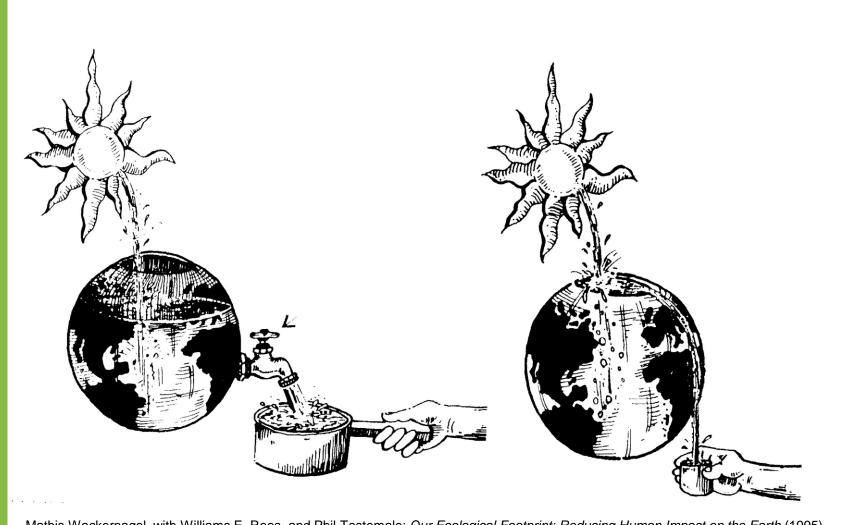
12th European Forest Pedagogics Congress, 5th Oct 2017

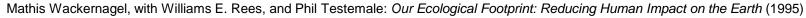
Dr. Rolf Jucker, Director SILVIVA, Switzerland

Overview

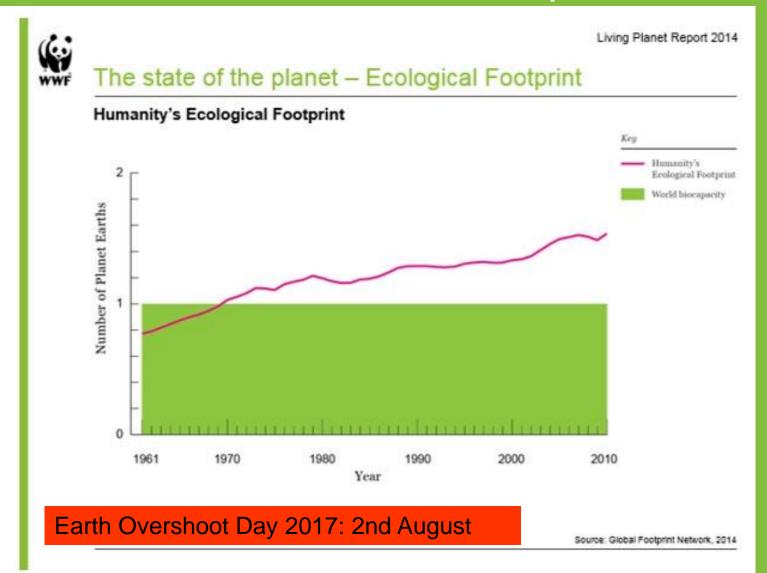
- 1. What is sustainable development?
- 2. What is successful learning?
- 3. How does Forest Pedagogy contribute to both sustainable development and successful learning (i.e. education)?
- 4. Conclusion & Discussion



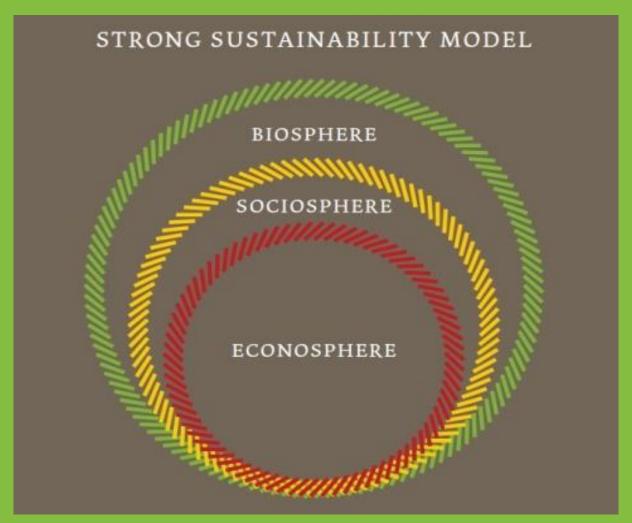










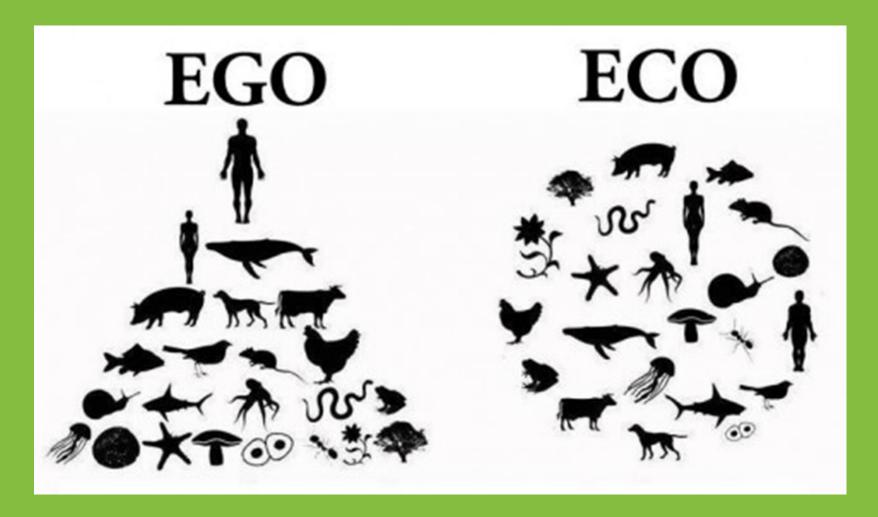


phase². The strong sustainability think tank (2013). What is strong sustainability? https://sites.google.com/site/strongsustainability/what-is-strongsustainability/what-is-strongsustainability © SANZ Inc. 2009



Could you please stop breathing for 5 minutes?







«I love the fact that human genomes can be found in only about 10 percent of all the cells that occupy the mundane space I call my body; the other 90 percent of the cells are filled with the genomes of bacteria, fungi, protists, and such, some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates.»

(Donna J.Haraway: When Species Meet. London, Minneapolis: University of Minnesota Press, 2008 [=Posthumanities, Vol. 3], S. 3–4)



John Hattie:

effective learning =

successful social interaction.

(John A. C. Hattie, Visible Learning. A synthesis of over 800 meta-analyses relating to achievement (London & New York: Routledge, 2008)





John Dewey (1859 – 1952):

«Give the pupils something to do,

not something to learn;

and the doing is of such a nature as

to demand thinking;

learning naturally results. »



Stuart Brown

«Humor, games, roughhousing, flirtation and fantasy are more than just fun. Plenty of play in childhood makes for happy, smart adults — and keeping it up can make us smarter at any age.» (http://www.nifplay.org/, see TEDtalk https://www.ted.com/talks/stuart_brown_says_play_is_more_than_fun_it_s_vital?la



nguage=de

Manfred Spitzer

«Only when I touch water can I learn what it means that water is wet. At the same time I hear it gurgle or drip, I see waves and reflexes, I smell the sea or the gras at the river bank. All this taken together gives me a holistic impression, which creates in me – together with lots of other similar experiences – a complex and differentiated representation of water.



(Manfred Spitzer: Lernen. Gehirnforschung und die Schule des Lebens. Heidelberg, 2006, P. 225)



2. What is successful learning? learning and learning environments

For learning to be successful you need: a *stimulating, rich* learning environment otherwise the modification of synaptic connections in the brain doesn't occur.

(Source: Wilhelmus Storz: Die neuronale Plastizität

http://slideplayer.org/slide/877708/#



What is needed for successful learning?

- Successful authentic social interaction
- Systemic understanding of the interdependence of human beings
- Doing, creating, shaping and experiencing enable and support learning
- Playing makes you clever
- A stimulating, rich, varied learning environment
- Touch is not optional



Bjoth/Dunlocky/kornell, 2012 Human menory / learning Computer memory * kaine worthde Spailey, abor Verknigty, in Bestely setten, Interpretation, Bedautys-* Heral writing / wortlishe speinley generation des neuen Wissens durch * je nehr gaspellat, dado wenter spellarplate slatet bestdendos Wissey -> bedentys volle Integration in Knowladay newfale Mode Knowledge * playlad: wollide / gerane * droser chiline Prosess der Generiety 184 Rudgrehm dos Espondosten vouen Verlampfjer & Bedentjen erwerted dre bruhapartet (broudt ere will The more you law & hum. the more you expand your capacity Le wown linits! * Abreva von Wissen At with playland, Souder Re-Konstruktion & I memory modifier - p Bruten verstallt passed on timbergandwissen, Erwalter & ge

'best practice' forest pedagogy offers provide:

- A stimulating multisensorial learning environment
- Strong social interaction in a real-life environment
- A strong emotional connection to the learning environment
- Experiential, hands-on learning with authentic role-models
- A systemic understanding of human-nature interaction and sustainability as a concept (sustainable forest management)
- Opportunities to play
 - effective learning which enables feedback & transfer into daily life















Holistic learning, just like that

«All aspects of the learner's personality are stimulated and you don't have to constantly think: have I forgotten something? (...) Every time when you go outside, you can tick every aspect. This is the beauty of it: it happens naturally without you having to push and pull.»

(Triny Gorza, nature based pedagoge, Schule Lorentzweiler, Projekt «Natur erliewen an der Schoul)



Natur based learning promotes a lot (but not everything)

- Increases well-being
- Dampens stress
- Increases feelings of self-worth, selfconfidence, self-awareness
- Increases creativity
- Improves motivation to learn and explore
- Strengthens self-discipline and self-reliance
- Improves concentration
- Can improve cognitive learning ability
- Improves language skills
- Improves social interaction
- Fosters co-operation

- Fosters communication skills
- Play is more varied, intense and creative
- Improves resilience against illness
- Kids move more outdoors
- Improves movement skills
- Improves environmental knowledge
- Kids who know more are less touchy, fussy
- The earlier the better
- Kids need perceptions with all the senses

(Andreas Raith, Armin Lude: *Startkapital Natur: Wie Naturerfahrung die kindliche Entwicklung fördert.* München: oekom verlag München, 2014)



Competences of successful forest pedagoges

The programme promotes environmental education skills for sustainable development in several of the following areas: Gaining knowledge · systemic / systems thinking Future-oriented thinking Cooperation Participation Developing empathy Critical reflection about values · Planning and action Taking on responsibility



And ESD?

In order to understand sustainability and live sustainably it is crucial to understand the fundamental systemic relationships, for example how human life fits in with the life-support system of planet Earth, society and the economy. Or, one cannot make sense of sustainability without a systemic ecological understanding.

Understanding such systems is a lot easier out in nature than indoors.

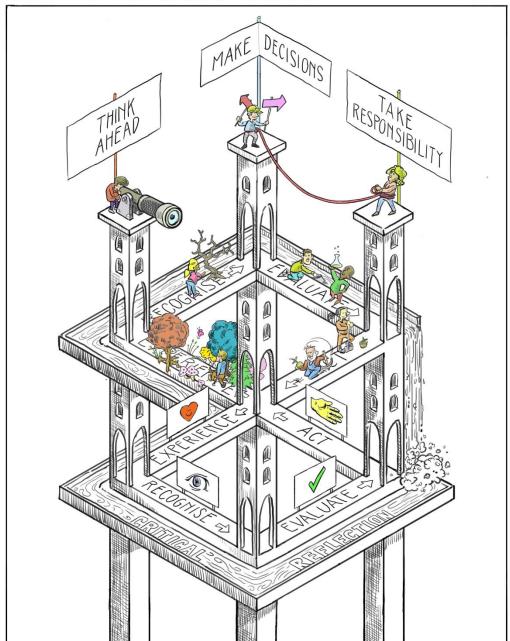
This means: there is no meaningful ESD without (nature based) environmental education such as forest pedagogy.



Conclusion & Discussion











Many thanks for your attention.... & questions



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