Transformative Learning and Indicators for a Sustainable Future



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The OKKA Foundation

- Foundation for teaching, education and personal development supporting the educational sector.
- Background organizations: The Trade Union of Education in Finland OAJ, Association for OAJ's Vocational Educators and Trainers OAO, Early Childhood Education Teachers Union of Finland
- Activities: teacher training, grants and acknowledgements, publications, education for sustainable development
- Sustainable Development Certification for Educational Establishments

More information in English: https://okka-saatio.com/the-okka-foundation/ http://koulujaymparisto.fi/in-english/

På Svenska: http://koulujaymparisto.fi/pa-svenska/



CHALLENGES OF SUSTAINABILITY

- Climate change, the depletion of natural resources and biodiversity loss challenge the contemporary idea of progress based on economic growth, mass consumption and technological optimism.
- Extensive research shows that the possibility of the absolute decoupling of environmental degradation and economic growth measured in terms of GDP is highly unlikely.
- Well-being of citizens in industrialized countries is no longer related to material shortfalls but **subjective well-being**.
- The modern societal narrative of progress does not fully recognize and acknowledge the uniqueness of every single human and does not allow personal growth to achieve "full humanness".

Steffen et al. 2015; IRP 2017; WWF 2020; BIOS (2018, 2019); Hickel & Kallis (2019); Max-Neef 2010; Matutinovic ym. (2016); Waden et. al. (2019); Wiedmann et. al. (2013); Järvensivu (2019); Hämäläinen (2014); Joutsenvirta & Salonen (2020); Maslow (2011).



Climate change proceeds – why the required transformation is so diffcult?



https://www.eea.europa.eu/publications/perspectives-on-transitions-to-sustainability



Our collective Western worldview

Atomistic and mechanistic worldview

1. Economy

2.Wellbeing

3.Ecology

Positivistic and reductionist sciences

Humans as masters of nature

> Economic growth paradigm

Humans as consumers

Laininen E. (2018). Transforming Our Worldview Towards a Sustainable Future; Bateson 1972; Norgaard 1994; Sterling 2019. Competitive society Industrial age society

Technooptimism

Materialistic wellbeing

Rational human mind

Globe: NASA





Hediger, W. (1999) Reconciling "weak" and "strong" sustainability. International Journal of Social Economics, 26(7/8/9), pp. 1120–1144.

Giddings, B., Hopwood, B. & O'Brien, G. (2002). Environment, economy and society: fitting them together into sustainable development. Sustainable Development, 10(4), 187–196. Ott, K. (2003). The Case for Strong Sustainability. In: Ott, K. & P. Thapa (eds.) Greifswald's Environmental Ethics. Steinbecker Verlag.

Baker, S. (2006). Sustainable development. London: Routledge.

Folke, C., Biggs, R., Norström, A. V., Reyers, B., & Rockström, J. (2016). Social-ecological resilience and biosphere-based sustainability science. Ecology and Society, 21(3), 41.



Gregory Bateson considered decontextualized and separative worldview typical of Western thought as a root cause for our ecological crisis (Steps to an Ecology of Mind, 1972)



I-It : decontextual separation

I-Thou: co-creation in context

Stephen Sterling (2003) has suggested an alternative conception of reality based on **whole systems thinking** as a solution for the required shift of epistemology (figure).



WHAT KIND OF LEARNING IS NEEDED FOR CONSTRUCTING A SUSTAINABLE FUTURE?

1) Reproductive orientation	2) Proactive orientation	3) Transformative orientation
Doing thi <mark>gs better</mark>	Doing better things	Renewing our relation to the Wolrd
PRODUCTIVITY	NEW INNOVATIONS	REDIFINING OUR NEEDS
Knowledge, reason	Reason + experience	Reason + experience + emotions, imagination

Adapted from Arto O. Salonen, Sources: Sterling (2003, 2010), Bateson (1972)



Response to climate change:

- Subjective wellbeing
- Seceding growth imperatives
- Sustainable local economies

Level 3

"Seeing the existence of alternative woods to be chosen from."







"Stepping out and seeing the wood as a

Response to climate change:

- Green and responsible products
- Renewable energy
- Circular economy
- Dematerialisation

Response to climate change:

- Energy&material efficiency
- Optimisation of logistics
- Recycling
- Emission trade



Levels of Learning: Gregory Bateson (1972), Stephen Sterling (2003, 2010) Response to Climate Change: Erkka Laininen (2018)



In 1969, astronaut **Russel (Rusty) Schweickart** became one of the first humans who was able to look at the Earth from space.

"And you realize that that perspective ... that you've changed, that there's something new there. That relationship is no longer what it was...

There are no frames, there are no boundaries."



Rustry Schweickart in Long Island, New York in 1974, based on Peter Senge, The Fifth Discipline (1990)



Planetary Sosial Pedagogy. (Arto O. Salonen & Erkka Laininen)



Eco-Social education

Finnish Core Curriculum

RESPONSIBILITY

• Broadening the circle of morality (human and non-human reality, future generations)





Adopted from Salonen, A., & Bardy, M. (2015). Ekososiaalinen sivistys herättää luottamusta tulevaisuuteen.

Indicators for a sustainable future

- Background: Sustainability Certification for Educational Establishments (OKKA Foundation), 106 certified units
- Finance from the Ministry of Education
- Indicators are a new innovation and reform to the certification system
- Theoretical basis in transformative learning, future studies and learning organisation
- Developed together with a nationwide network of vocational institutions
- eDelphi online future tool is used for evaluation
- Evaluation ongoing in 35 institutions



The contents of the indicators

	IN	DICATOR	REPRODUCTIVE	PROACTIVE	TRANSFORMATIVE
(5)	1. E	Educational targets	PRESENT VOCATIONAL SKILLS	FORECASTING OF FUTURE SKILLS	GLOBAL VIEW, SUSTAINABILITY
EACHING	2. L b	earning sustaina- pility competencies	SKILLS RELATED TO WORK PROCESS	CRITICAL AND SYSTEMS THINKING	FUTURES THINKING
F	3. L e	earning environments	ADAPTATION TO CULTURE	SUSTAINABLE PRACTICES	TRANSFORMATION OF CULTURE
URE	4. L a	earning community and partnerships	LEARNING INDIVIDUAL	LEARNING ORGANISATION	LEARNING NETWORK
	5. E r	nvironmental esponsibility	FULFILLING REGULATIONS	ENVIRONMENTAL RESPONSIBILITY	CIRCULAR ECONOMY, CARBON NEUTRALITY
SCHO	6. V	Well-being	PHYSICAL ENVIRONMENT	COMMUNITY AND PARTICIPATION	COMPASSION AND MEANINGS
MANAGEMENT	7. S	Strategy	REACTIVE AND PRESERVING	PROACTIVE AND REFORMING	SUSTAINABILITY-ORIENTED
	8. L	.eadership	PRODUCTIVITY AND CONTROL	CHANGE AND DIVERSITY	VALUES, VISIONS AND NETWORKS
	9. S	Staff development	BASIC WORK SKILSS	SUSTAINABILITY SKILLS	ECO-SOCIAL EDUCATION
	10. I d	Evaluation and levelopment	DEFINING INDICATORS	CULTURE OF DEVELOPMENT	PARTICIPATION OF PARTNERS



Sustainability competencies **GLOBAL DIMENSION OPERATIONAL ENVIRONMENT PROACTIVE/REFLECTIVE COMPETENCIES** Systems thinking Critical thinking Problem solving skills **WORKPLACE** Interaction skills

• Creativity

REPRODUCTIVE COMPETENCIES

- Material efficiency
- Recycling
- Energy efficiency
- Hazardous substances
- Occupational health & safety
- Customer service

WORK PROCESS



R

TRANSFORMATIVE COMPETENCIES

- Sustainability issues in the global perspective
- Eco-Social education
- Mindfulness and emotional skills
- Futures literacy
- Change agency

PROACTIVE/REFLECTIVE COMPETENCIES

- Product life cycles
- Corporate responsibility
- Values and professional ethics
- Circular and sharing economy
- Renewable energy
- Constituents of well-being
- Clean technology

REPRODUCTIVE COMPETENCIES

- Organizational values and targets
- Sustainability in business
- Quality and environmental management systems
- Contributing to environmental, safety and well-being issues of the workplace

Characteristics of the three orientations





	INDICATOR 2: Lear sustainability com	ning of petencies		Students innovate
				solutions in cooperation with workplaces
				Values of Eco-Social education are realised in everyday life of the institution
NTATION		Sustainable ways of action are practiced at	Sustainability issues are learned using	Students evaluate and develop ways of action in own vocational institution and at workplaces
OKIE		workplaces	systems and critical thinking	Future perspective is integrated in learning
	Learning of SD competencies focuses on the work	Knowledge-base of sustainability is linked to learning vocational competencies	Sustainability issues are discussed and learned in the societal context	sustainability issues
RE PI	process		+	++

- PROACTIVE ORIENTATION





PROACTIVE ORIENTATION







Dialogue on the insitution level

- Results of the different evaluation teams
- Arguments and suggestions for development



Development plan

- Long-term targets
- Annual action plan



Lesson learned from the pilot phase of the indicators in Finland

- The new approach challenging the existing thinking and systems has been warmly welcomed.
- At the same time, the contradiction between "old" and "new" is not too wide to prevent the use of the indicators.
- Several vocational institutions have taken sustainable future and transformative perspective as their strategic goals.
- The participative evaluation process has increased the collective understanding of the position of the institution with regard to the reproductive, proactive and transformative orientations of action.
- Evaluation processes have resulted in valuable information for the base of future developments.
- Some 35 institutions are on their way towards certification of their operation based on the indicators.
- There are still needs for improvement in the indicators, supporting materials, evaluation tools as well as in the whole process. We are expecting to launch a new development programme to answer these challenges in the beginning of 2021.

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STRATEGY 2020 ->

Forssa Vocational Institute

Example of the use of the indicators for strategic planning

"Our targets on climate actions and circular economy are ambitious. We want to set an example to others with our systematic actions on reducing our environmental impact and minimizing our carbon footprint."

"We develop partnerships in order to create in interaction and collective transformative actions our networks." *"We innovate educational products and future solutions promoting sustainability together with the working life, educational sector, and our customers and owner municipalities."*

"Our institution aims at broadening the conception of sustainability competencies towards Eco-Social education and global dimension."

"Education has a role in shaping the future vocational field and as an active operator and partner of development."



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