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Monitoring and Evaluating Education for Sustainable Development

"ESD is an educational change agenda grounded in transformative learning and critical pedagogy. It can be understood as a lens that permits us to look critically at how the world is and to envision how it might be and equips us to deliver that vision" QAA / Advance HE ESD Guidance 2021

Transformation with/through? monitoring and evaluation – engagement with both processes and outcomes:-

The Learning Spiral



1 Discuss	Define ESD for context	
2 Map	Scope baseline ESD	
3 Plan	Set goals and action plan	
4 Support	Enhance and deepen ESD	
5 Evaluate	Assess ESD outputs and impacts	
6 Reflect	Adapt next cycle of plans	















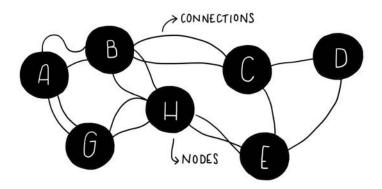
Key competencies for sustainability

Specific		A student who displays this competency can				
•		A student who displays this competency can	VA/ C.I. I.			
subject	Systems thinking		Ways of thinking			
knowledge	competency	consider how systems are embedded within different domains and				
and		scales, deal with uncertainty				
knowledge	Anticipatory	understand and evaluate multiple outcomes, create their own visions				
of SDGs	competency (Future	for the future, apply the precautionary principle, assess the				
	thinking)	consequences of actions, deal with risks and changes				
	Critical thinking	question norms, practices and opinions, reflect on one's own values,				
	competency	perceptions and actions, sustainable development discourse				
	Strategic competency	develop and implement innovative plans and actions that further	Ways of practising			
		sustainable development at the local level and further afield				
	Collaboration	learn from others, understand and respect the needs, perspectives				
	competency	and actions of others, deal with group conflicts, collaborative &				
		participatory problem solving				
	Integrated problem-	apply different problem-solving frameworks to complex sustainable				
	solving competency	development problems, develop viable, inclusive and equitable				
		solutions, utilise appropriate competencies to solve problems				
	Self awareness	reflect on own values and actions; monitor feelings and needs	Ways of being			
	Normative	understand and reflect on norms and values underpinning actions,				
		appreciate other worldviews, negotiate goals and trade offs				

Competencies assessment

- Specific competencies can be evaluated via assessments, for example:
 - Critical thinking essay
 - Systems thinking systems maps and reflection
 - Self awareness reflective diaries and essays
 - Collaborative competencies group projects
- But how do we assess suites of competencies across a learning unit?

SYSTEM MAPPING





https://medium.com/disruptive-design/tools-forsystems-thinkers-systems-mapping-2db5cf30ab3a

Competencies survey

- Asks students to reflect on the extent to which they have developed or strengthened their competencies in a given module or programme
- Uses Likert responses to 4 statements per competency
- Explicitly states that not all modules will emphasise all competencies



Key competencies survey

https://www.qaa.ac.uk/docs/qaa/members/student-competenciessurvey-for-distribution.docx

White and Mobius

Systems thinking

holistic way to see the world, recognizing complexity and relationships between factors

This module has supported me to:

	Strongly	Agree	Neutral	Disagree	Strongly
	agree				disagree
	1	2	3	4	5
-understand that many sustainability issues are connected in					
systems					
-be able to identify interconnected elements and complexity					
within a system					
-know how a system functions, such as development of					
resilience, feedback loops and tipping points					
-map a system in either real or virtual ways, for example, mindmapping or network analysis					

Beyond the UN competencies?

 Normative competency: the ability to understand and reflect on the norms and values that underlie one's actions and to negotiate sustainability values, principles, goals and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions

 Self-awareness competency: the ability to reflect on one's own role in the local community and (global) society, continually evaluate and further motivate one's actions, and deal with one's feelings and desires



• How to accommodate human-nature relationships?

• How to include cultural and spiritual beliefs, feelings and emotions?

• How to overcome anthropocentric focus of ESD and allow more-than-human perspectives?



Kibble on Twitter: "Social Pedagogy informs our work

Higgins & Nicol, 2011



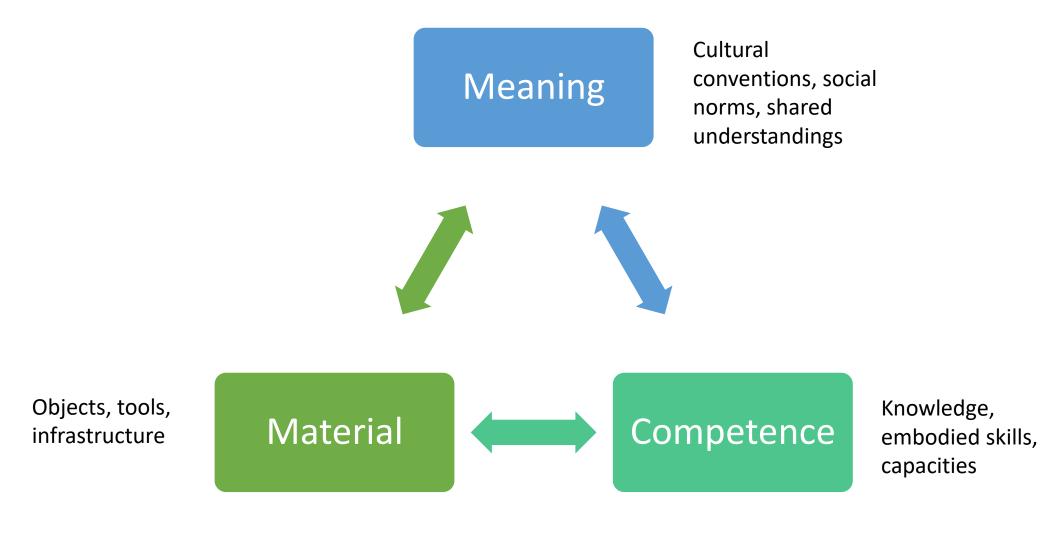
Individual behaviour change

Values

Attitudes

Behaviours

Societal norms and practices



Adapted from Shove et al (2012)

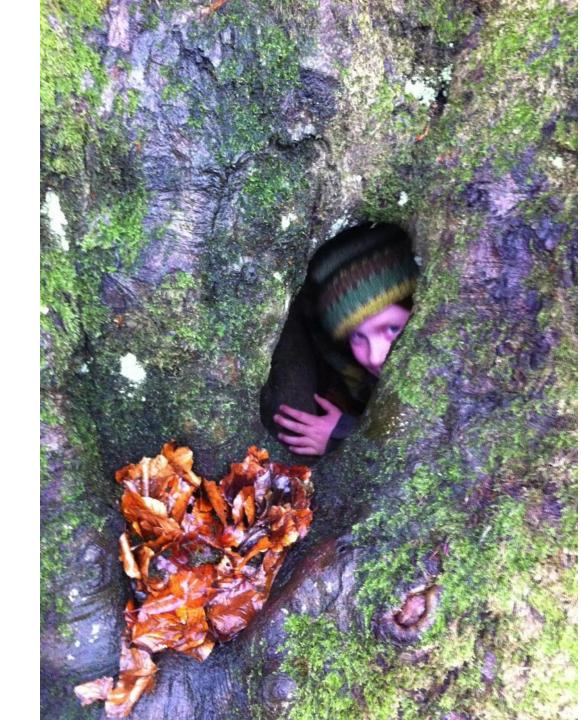
Human-nature relationships

- Overcoming nature deficit disorder
- Place responsive pedagogies
- Supporting strong sustainability
- Respecting indigenous ontologies
 Louv 2005, Lynch and Mannion 2021,
 White et al 2023



Outdoor learning

Last child in the woods: saving our children from nature-deficit disorder Louv (2005)









example

• Fieldtrip to Iona

Cultural context

- 'the parish was not a perimeter, but an aperture: a space through which the world could be seen' Nan Shepherd 1977
- Caledonian antisyzygy (hold together seemingly contradictory traditions in creative confluence) (Kockel 2021)
- 'think global act local'
- Geddesian triads *Place—Work—Folk* and *Heart-Hand-Head* (Geddes 1919,1949)
- Generalism and the Democratic Intellect (McFadyen & Nic Craith 2019)
- Community and internationalism (Meyerricks and White 2021, McIntosh 2004)



Scotland context















example

• Fieldtrip to Oban

More-than-human

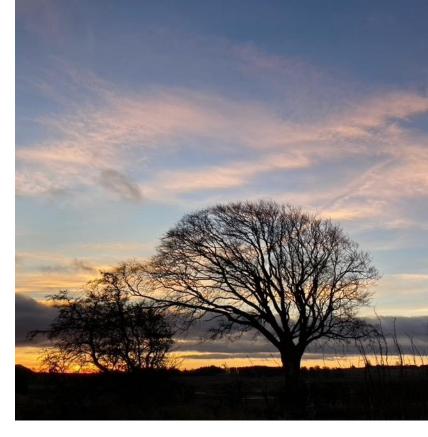
Going beyond anthropocentric interpretations of sustainability to include a sociomaterial approach, decentring the human through the materiality of learning (e.g. nature, humans, other species,), challenging binaries (e.g. nature/culture, human/nonhuman,) and exploring human and more-than human assemblages.

Kopnina 2012, McKenzie and Bieler 2016, Kickling and Sterling 2017, Lynch and Mannion 2021









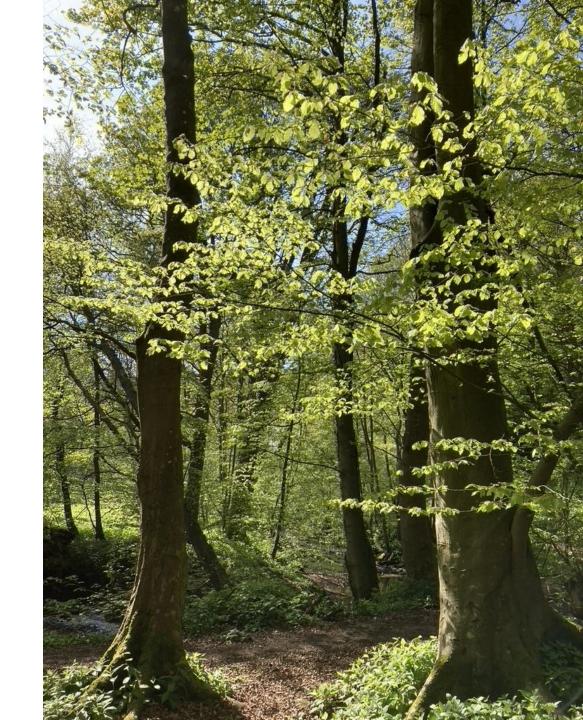
example

• Rights of nature, assemblage theory, new materialism, ethics of biosecurity

New competency?

Nature relations and rights

- Include physical, emotional and spiritual aspects of nature connection
- Acknowledge cultural context, history, social justice and place relevance
- Recognise relational and socio-material pedagogies, more-than-human and rights of nature



Conclusions

- The focus on competencies is welcome
- The UN competencies are functional but may omit wider heart linked aspects
- Human-nature relationships, cultural context and more-than-human aspects are insufficiently integrated
- An additional nature relations and rights competency and other ways of supporting emotional and spiritual connections and nature centred approaches are required

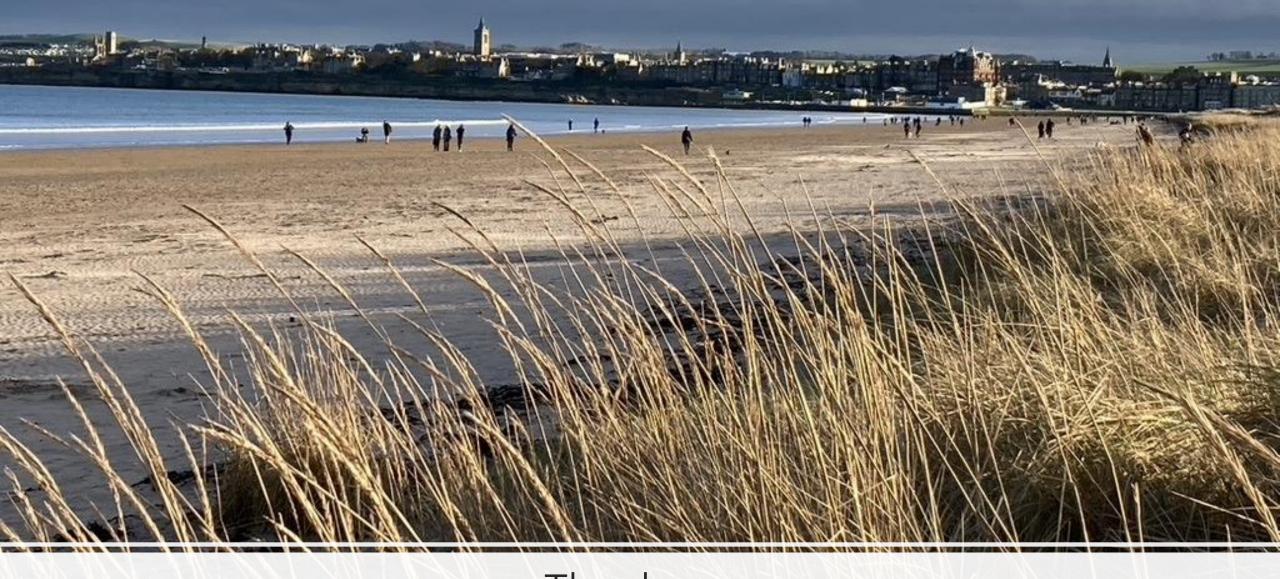


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