



Innovative pedagogies and learning for sustainability

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contents


Why do we need to think about pedagogies in LfS?

What are 'innovative pedagogies'?

What forms might they take?

Challenges and solutions

Conclusion



Why do we need to
think about pedagogies
in LfS?

What is the purpose of LfS?

- Not just learning *about*, learning *for* sustainability.... (Hopkins 2012)
- UNESCO aims to improve access to **quality education** on sustainable development at all levels and in all social contexts, to transform society by **reorienting education** and help people develop **knowledge, skills, values and behaviours** needed for sustainable development. It is about including sustainable development issues, such as climate change and biodiversity into teaching and learning. Individuals are encouraged to be **responsible actors** who resolve challenges, respect cultural diversity and contribute to creating a more sustainable world.

Competencies frameworks

(Wiek et al 2011,
Giangrande et al in press)

Type	examples
Anticipatory	Developing narratives of the future
	Backcasting and forecasting skills
	Working with scenarios, risks, intergenerational equity, and unintended consequences
Systemic working	Ability to work with key aspects of systems theory; tipping points, nested hierarchies and slow and fast variables and resilience
Interpersonal	Including skills around mediation and conflict resolution
	Leadership and team building
	Communication skills, including empathy and empathic responses
	Transcultural thinking and deliberation and negotiation
Normative	The development of worldviews and perspectives
	Ability to assess the stability of current or future states
	Ethical questions, including risks and tradeoffs
	Ability to assess well being
Strategic	Planning, decision making, assessment of obstacles, identification of success factors
	Knowledge of behavioural change
	Organisational development
	Use of Kolb's action reflection cycle.
Intrapersonal	Presencing, self awareness, stress management, meaning making, connection with self, capacity for inner peace, mental wellbeing, self-reflection



*“An effective **whole school and community** approach to LfS weaves together **global citizenship, sustainable development education, outdoor learning and children’s rights** to create coherent, rewarding and transformative learning experiences” Vision 2030 report 2016*

Pedagogy (+ Curriculum)

the methods and practices of teaching, including styles, feedback and assessment and theory

Behaviourism – teacher centred eg lecture based, subjects separated

Constructivism – learner centred, learning through experience and reflection eg projects, often outdoor learning

Social constructivism – teacher guided, student centred, a collaborative learning process eg individual, small group and varied work

Liberationist – critical pedagogy, student centred, co-learning with teacher, democracy in class eg student led topics, dance, performance (empowerment – Freire) (Hallahan 2018)



Innovative pedagogies

- New to you?
- Not currently used by your programme, department or institution?
- Novel for LfS?
- Innovative for FHE?



What forms might 'innovative pedagogies' take?

(examples from the University of St Andrews
Sustainable Development programme)

Approaches

- Difficult to change totally at Sub Honours, but leverage points in assessment
- At Honours more potential for student led activities, projects, different forms of assessment
- Events that are outside 'normal rules' eg induction, away days
- Extra-curricular?
- Different scales – small interjections in class, class activity, assessment, residential fieldtrips, research in/on/with community....



Outdoor learning

- Residential fieldtrip to Findhorn EcoVillage – walk, talk and experience
- Residential fieldtrip to Orkney Isles with research in action
- Pizza making at the Doorstep Bakery community initiative
- ‘Fieldtrips’ in 1st, 2nd, 3rd years– Eden estuary, Biomass plant, BREEAM outstanding newbuild, anaerobic digesters, golf course
- Tutorials outside

Module framing

- Design – theory of design, design ‘something’, fieldtrip on design
- Material based learning – willow – social cultural aspects, fieldtrip to make something, further making
- Research design – theory, methods, design, project and presentation eg Orkney



Reflective exercises

- Reflective essays (on self, literature, fieldtrip, research)
- Measuring past carbon footprint, planning reduction and measuring ongoing carbon with reflective essay (1st year)



Student led activities

- Seminar series in second year
- Student groups making posters
- Role plays



Research /contributions to community

- Orkney projects
- Projects on university sustainability issues
- 'learning labs'
- Transition University of St Andrews
- Governance





Challenges and solutions(?)

Challenges

- Difficult to facilitate student led processes within learning outcomes, handbook facing, pre-organization of assessment and audit culture
- Student concern for grades rather than learning
- Student expectation of certain activities and performances
- Student feedback (ask for later assessment before graduation!)
- Lack of support – unsympathetic directors of teaching, deans, external examiners
- Time, energy, planning, resources
- Transformative learning can be painful

Solutions?

- Start small?
- Think through details, GRC, timing
- Get students on side
- “participatory curriculum development”
- Submit for awards eg EAUC Green Gown awards to get external recognition
- Seek student feedback at time and later in degree course

Conclusions

- We encourage you to start small, be brave, explore!
- Innovative pedagogies can re-instil a sense of joy to teachers as well as learners
- Innovative pedagogies can permit you to explore more routes to whole institution learning, linking teaching, research, operations and management
- Innovative pedagogies allow learners to experience better LfS, assisting development of competencies and transformative learning