

Step-Change for Sustainability

EAUC-Scotland
Conference



ESD competency-building through innovative pedagogies: analysing practice

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Introduction



- Dr Ria Dunkley, Kathrin Möbius & Lucy Patterson
- Aims:
 - Illustrating the importance of pedagogy and going beyond content
 - Seeing and understanding pedagogies in practice
 - Thinking about next steps: how we can take action in our context?

Session overview



1. Why is pedagogy important?
2. What is pedagogy and what frameworks are there?
3. Examples of practice
4. Collaborative activity and action plan

A close-up, shallow depth-of-field photograph of a typewriter keyboard. The focus is on a single key in the foreground, which has a small, dark, circular mark on its top. The background shows other keys, but they are blurred. A solid blue horizontal bar is superimposed over the middle of the image, containing white text.

Why is pedagogy important?

- Fast paced changes & multiple crises: complexity and challenges
- Need for addressing these collaboratively and sustainably
- Education: Empowering learners to do so – but needs to go beyond knowledge transfer

We need more than knowledge to cope with the complexity and challenges of our world.

- Going beyond knowledge to cope with complexity and challenges:
Knowledge + skills + values & attitudes = ...

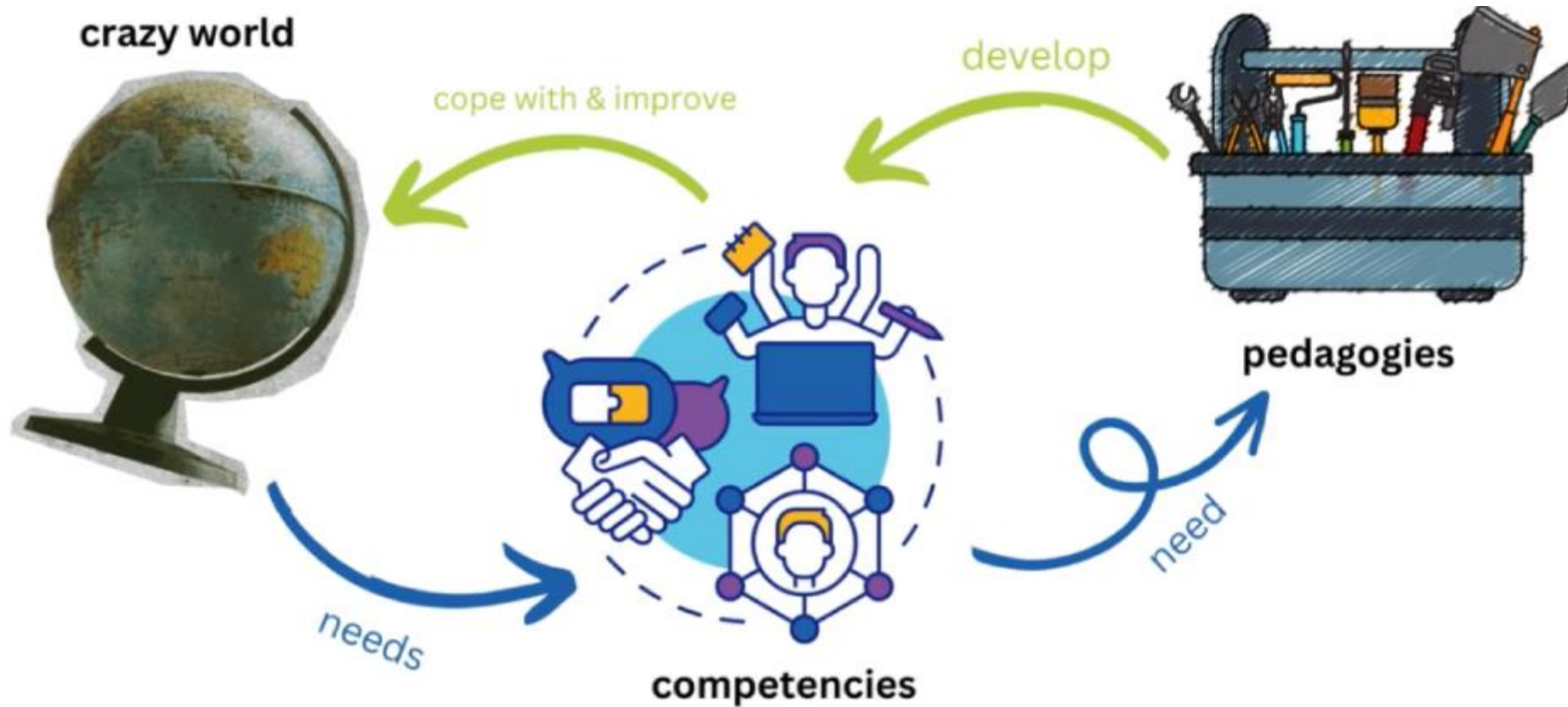
...competencies

Learners need to develop
competencies to cope with complexity and
challenges.

- Competencies can't be “transferred”
- Need to be developed by the students within their realities and understanding of the world
 - Needs methods that allow for this → pedagogy!

To facilitate the development of competencies, we need pedagogy.

The need for pedagogy in a nutshell



A close-up photograph of a person's hands weaving on a wooden loom. The left hand holds the top of the loom, while the right hand manipulates a thread. The loom is made of light-colored wood and has many vertical threads. A blue fabric is visible at the bottom. A blue banner with white text is overlaid on the image.

Pedagogy: Aspects and frameworks

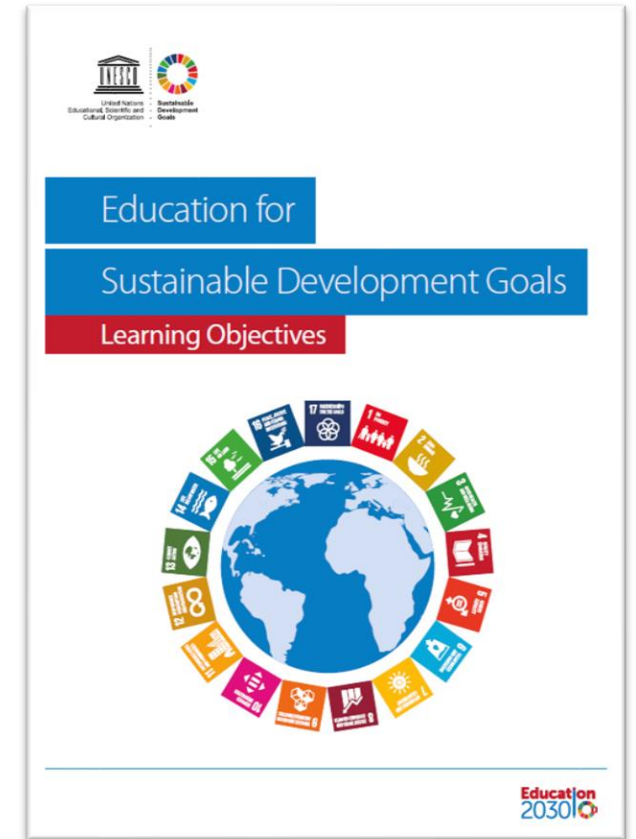
What is pedagogy?

- How we teach, rather than what content we teach: “the art of learning and teaching”
- Encompasses teaching methods in the classroom, but also assessment, assignments, and feedback



One Framework: Education for Sustainable Development (ESD)

- A framework to start with and contextualise – but not the only framework!
- UNESCO, 2017: “ESD is holistic and transformational education that addresses learning content and outcomes, pedagogy and the learning environment.”
- Well known and widely established, e.g. also used in QAA guidance
- Addresses competencies and pedagogies



UNESCO ESD competencies

- Critical thinking competency (questioning practices, opinions, norms)
- Systems thinking competency (see & understand complex relations)
- Anticipatory competency (considering multiple outcomes, creating visions)
- Strategic competency (develop and implement actions)
- Collaboration competency (learning from/working with others)
- Integrated problem solving competency (interdisciplinary approach)
- Self-awareness competency (reflecting on own values, role, action, desires)
- Normative competency (reflecting on norms, values, negotiating despite uncertainty)

ESD innovative pedagogies

- Problem-based learning
- Enquiry based learning
- Collaborative learning
- Learning through storytelling
- Play-based or playful learning

Videos coming soon, but first...



Other approaches



Video presentation by Ria Dunkley

Video footage

- Please see the downloads area at the sustainability exchange

Quick chat

Turn to the person beside you for 1-2 minutes

What do you think are the most important things students need to take away from their education with us?

which attributes, skills, values, knowledge,...





Pedagogies in action

Three examples

Pedagogies & ESD competencies

University of Leicester: Supporting experiential learning in the classroom



- **Sustainability Enterprise Partnership Project (SEPP):**
- Work related learning module run by Dr Sarah Gretton, Alice Jackson and Asha Mistry.
- Students from Biological Sciences, Creative Computing, Geography, and Physics
- Working in groups across disciplines and directly with a business to complete a **sustainability audit and generate a report on the business's social and environmental impact** which is fed back to the organisation.

University of Leicester: Supporting experiential learning in the classroom



- Week 7: **Reflection** after students have taken part in networking activities.
- Students come together in their groups during the session, and then towards the end of the session are invited to share their learning and reflect through submitting their thoughts anonymously.

University of Leicester: Supporting experiential learning in the classroom



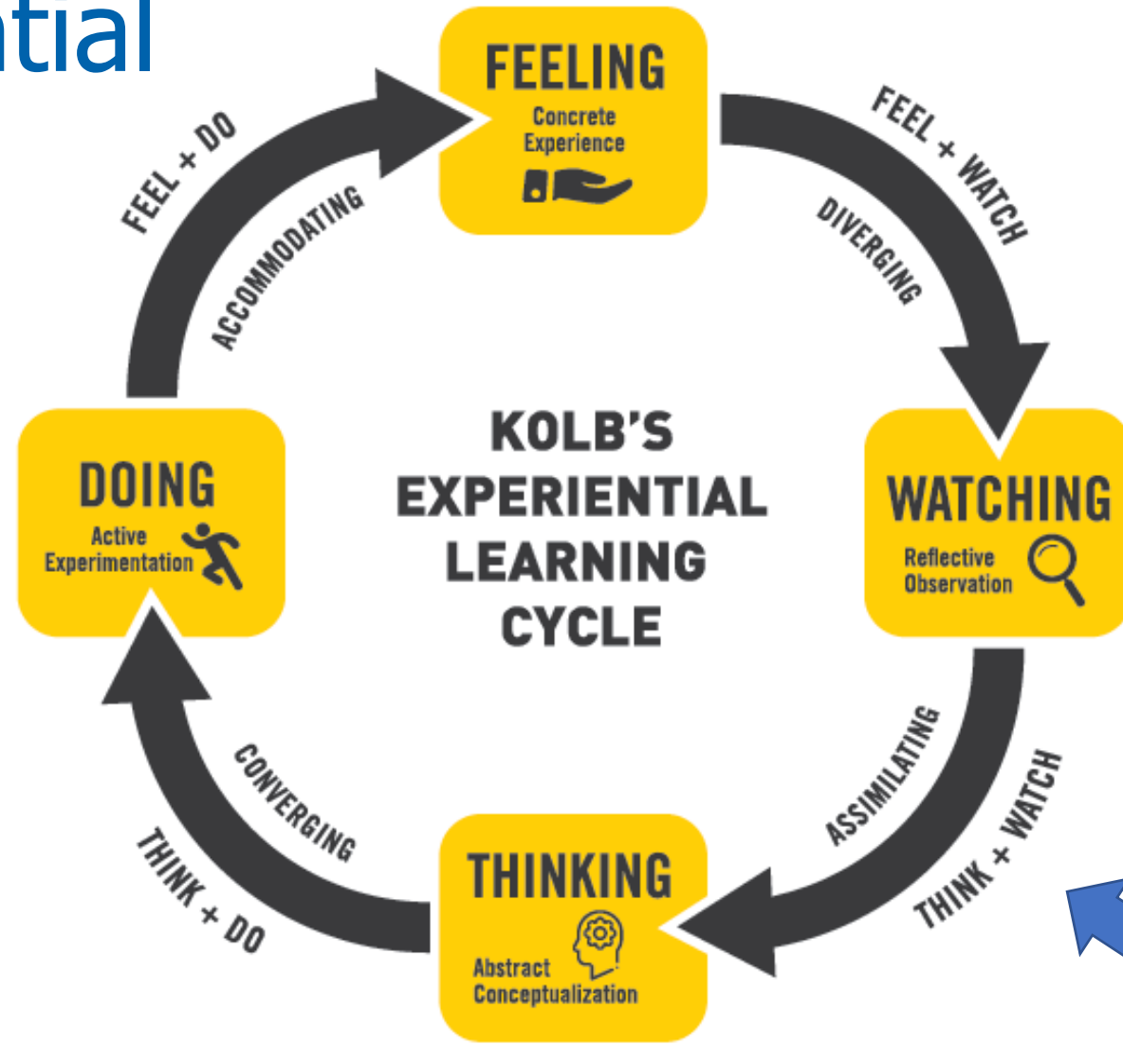
- Pedagogies harnessed:
- **Overall module:** Problem-based and collaborative learning
- **This exercise:** Experiential learning, contemplative learning

Problem-based learning & collaborative learning aspects



- “Problem”/situation is presented
- Module is structured around this situation
- Choice about where they set their focus and how they approach the report: They need to acquire the needed knowledge themselves
- Students do so collectively, requiring peer-to-peer learning and collaborative decision making

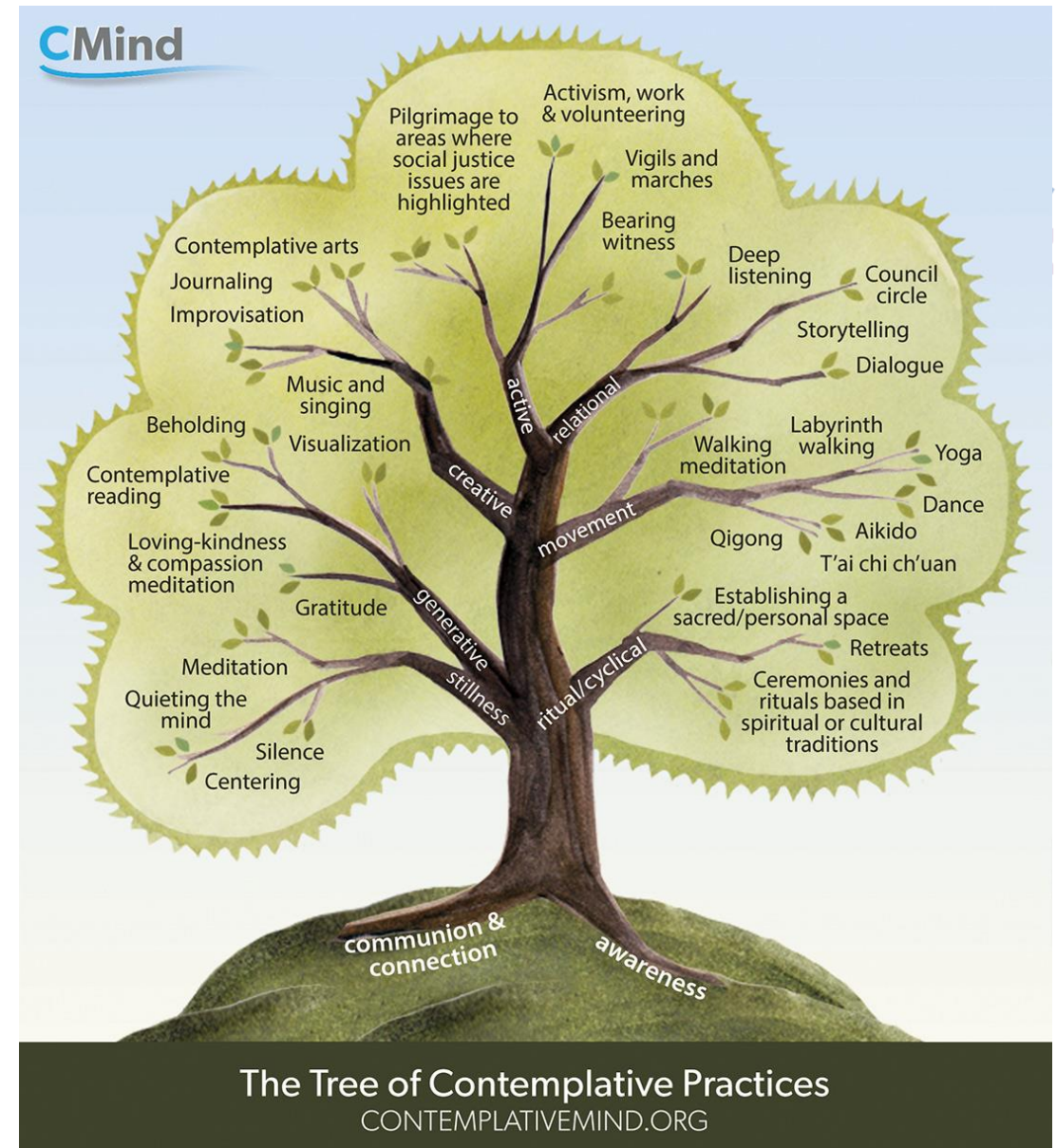
Experiential learning



<https://www.uwindsor.ca/fahss/online-advising/716/what-experiential-education>

Contemplative learning

- Include and work with learner's emotional reactions: learning on an emotional, not just cognitive level
- Includes e.g. self-enquiry and compassion/connecting with others
- Often include wider creative and kinaesthetic approaches, e.g. visualisations, arts-based learning, learning through physical exercise, meditation, etc. → tree



<https://www.contemplativemind.org/practices/tree>

Activity: Networking in Practice

- 5 mins to practice networking amongst yourselves – pay attention to how it feels, we will reflect after!
- Pick 1 person in the room who isn't on your course/ isn't your friend/ isn't in your group
 1. Shake their hand
 2. Introduce yourself & what you study
 3. Find out 1 interesting thing about the other person
 4. Ask to connect with them on LinkedIn

University of Leicester: Supporting experiential learning in the classroom

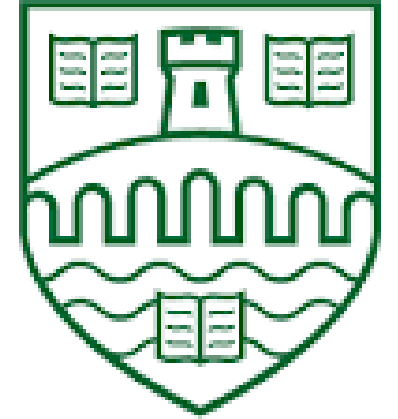
Video to be played here – please see [Sustainability Exchange](#) page to watch this video.

University of Leicester: Supporting experiential learning in the classroom



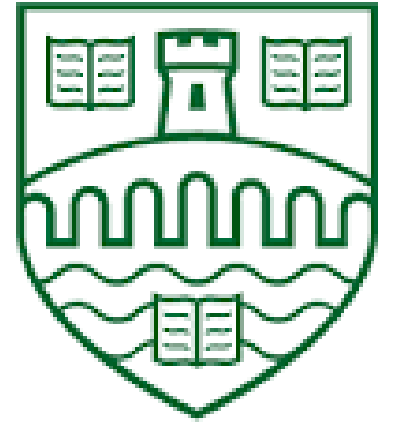
- Competencies supported through the activity and reflection:
 - Self-awareness competency
 - Collaborative competency
 - Interdisciplinary/integrated problem-solving competency
 - Anticipatory thinking
- Considering the context and making the link to sustainability

University of Stirling: Building self-awareness outside of the curriculum

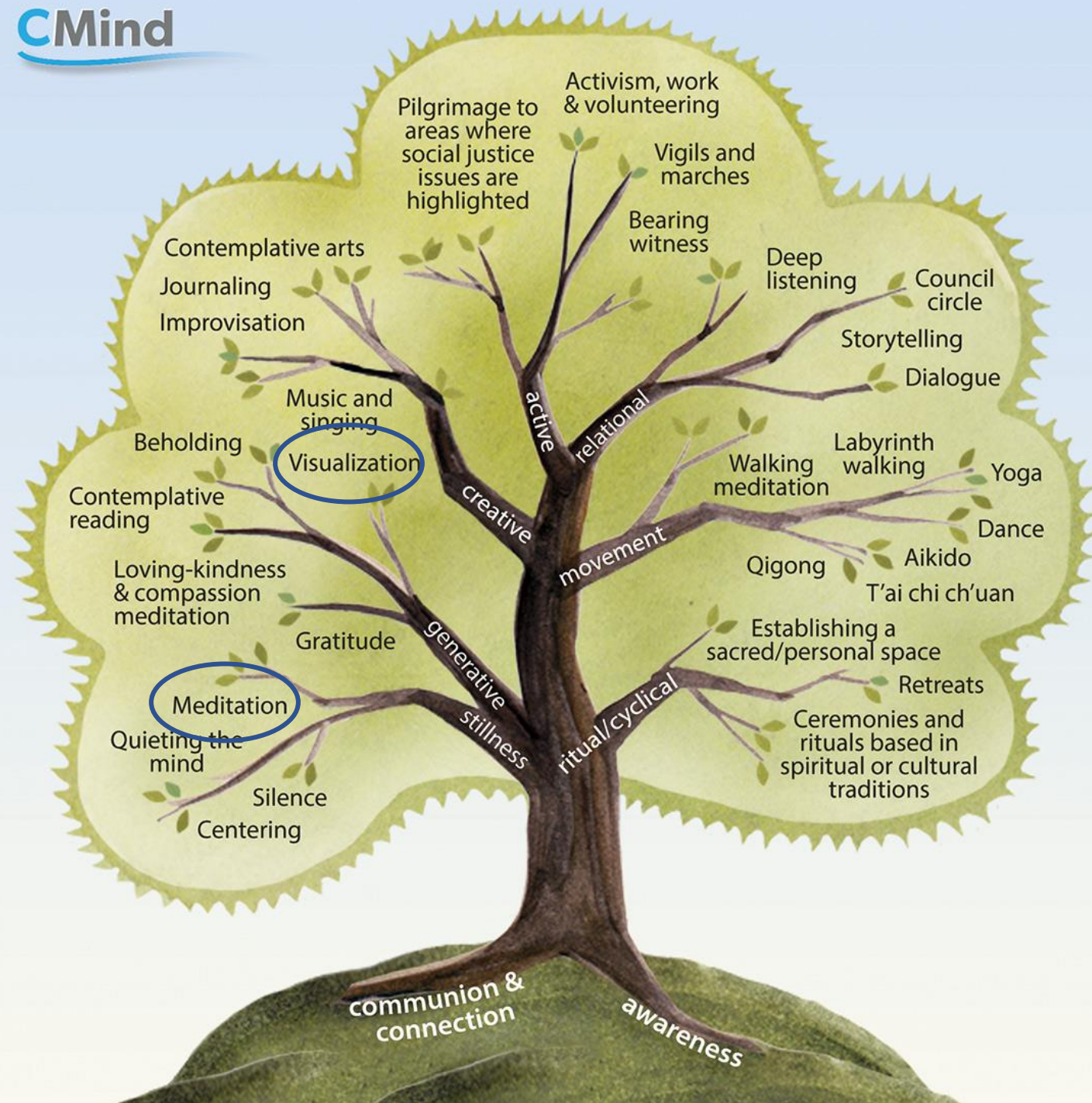


- Flying Start Leadership programme: introduction week programme run by Dr Carol Marshall and colleagues at the Stirling Management School, for postgraduate students.
- “programme of activities, which will challenge your perspective of culture and develop your self-awareness, as well as develop your team-working, problem-solving and communication skills.”
- Materials for online programme include pre-recorded videos and audio clips and online dashboards for participants to interact and share reflections.

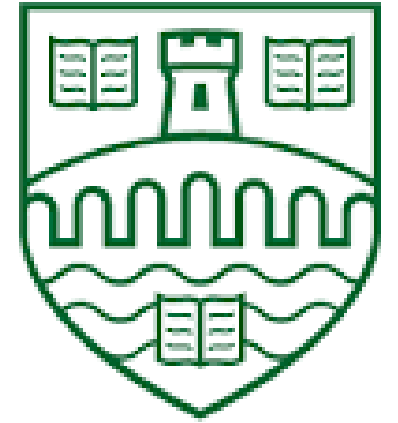
University of Stirling: Building self-awareness outside of the curriculum



- 2 minute audio clip – online, pre-recorded, also used face to face for undergraduate students
 - Accessible to produce for many contexts
- Pedagogies used:
 - Aspects of learning through storytelling
 - Future self as a character
 - Contemplative pedagogy – mindfulness/meditation aspects

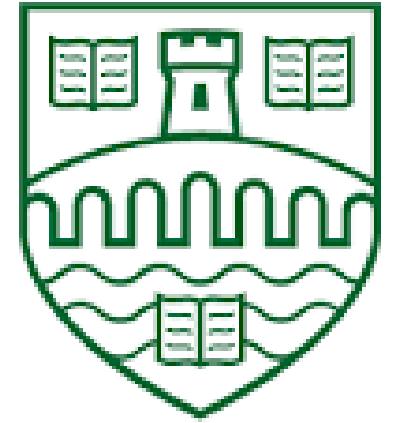


University of Stirling: Building self-awareness outside of the curriculum



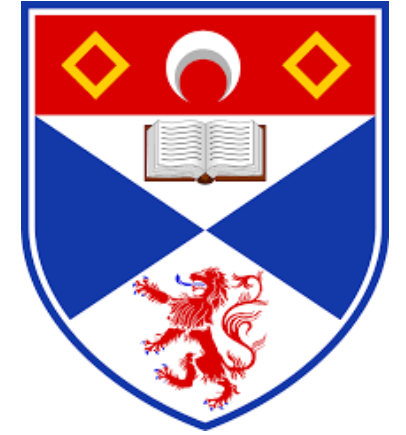
Audio to be played here – please see [Sustainability Exchange](#) page to listen to this audio clip.

University of Stirling: Building self-awareness outside of the curriculum



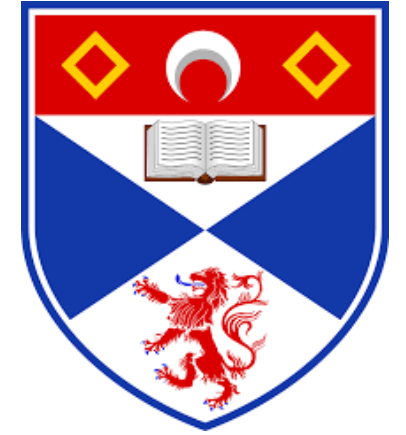
- Competencies supported:
 - Self-awareness competency
 - Anticipatory thinking (creating visions)
- Importance of context

University of St Andrews: Learning through creative assessment



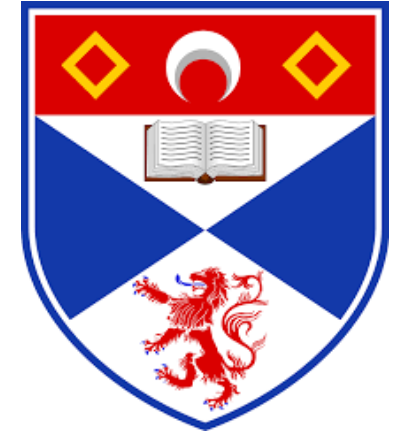
- Jane Pettegree from St Andrews Laidlaw Music Centre: work done with students on a first year elective module called “Words and Music”
- Music is not a full degree, students take music modules as electives, interdisciplinary nature of the module
- Excellent example of how assessment can be used to foster competency development and deepen learning

University of St Andrews: Learning through creative assessment



- Students whose work is featured in case studies:
 - Lexie Dykes (Art History),
 - Lucy Reynolds (Social Anthropology and History),
 - Kirstin Spence (Geography & Sustainable Development)
- Theory around soundscapes: please see slides/materials you will be sent after this session.

University of St Andrews: Learning through creative assessment



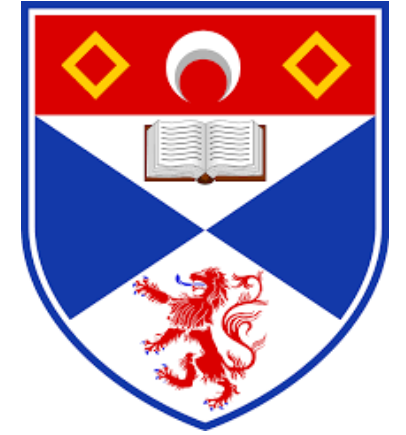
- **Pedagogies used:**

- Learning through storytelling: variation of Learning through sounds
- Enquiry-based learning
- Place-based learning: engaging with environment and community

University of St Andrews: Learning through creative assessment

Video to be played here – please see [Sustainability Exchange](#) page to watch this video.

University of St Andrews: Learning through creative assessment



- Competencies supported:
 - Interdisciplinary / integrated problem solving competency
 - Self-Awareness competency
 - Normative Competency

Pedagogy examples: Going beyond this workshop



- Plans for a pedagogy library – possibility to get involved in shaping the format and filling it
 - Potential collaboration with SOS-UK
- More examples **from colleges** wanted!

Discussion – question prompts



- Think back to what you said what you want students to achieve/develop: Which of the discussed pedagogies promise to be effective for your context?
- Where are you at in your institution/context? Which pedagogies are used already? Why are some others not used?
- What are barriers and opportunities to increasing the use of innovative pedagogies beyond knowledge transfer?

So... What now?

Road map activity – identifying steps to take

Roadmap: Three options

- How can you integrate innovative pedagogies more **in your own** practice?
- How can you support **colleagues/your institution** to integrate innovative pedagogies?
- How can you support the integration of innovative pedagogies **across institutions/on a policy level**?

Create a vision: where do you want to be?
Then create the road to get there.

- Last 5 minutes: Individual action plan: What is *your* next step? (see paper template)

A hand is shown from the wrist up, holding a bright, glowing yellow-orange sphere. The background is dark with several out-of-focus light sources, creating a bokeh effect. The word "Conclusions" is written in white on a blue rectangular background, centered over the sphere.

Conclusions