

Enacting Education for Sustainable Development (ESD): spotlight on teaching practices for exploring 'Worldviews, Perceptions and Values'.



Webinar 1 of 3: Internal Dissemination

Background to Enacting ESD Module Development in Trinity, and theory underpinning *Worldviews, perceptions and values* workshop design.

Dr Cicely Roche, TCD

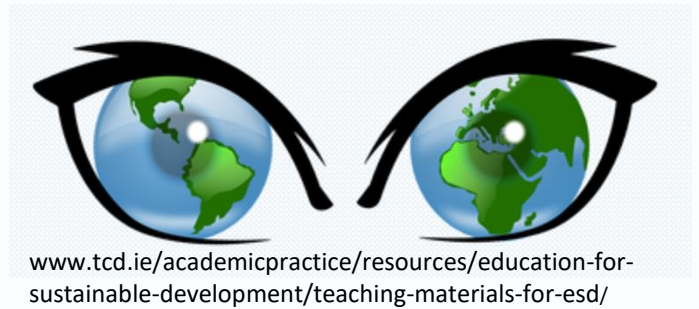
15 Dec 2025, Trinity College Dublin (online).



Co-funded by
the European Union

Acknowledgements

CHARM-ED, TCD ESD Project and SATLE Funding (HEA)



The Trinity College Dublin, Eötvös Loránd University and the University of Barcelona partnership is supported by [CHARM-ED](#) (2025-2026) *funding to support the development, enhancement, or redesign of higher education and lifelong learning activities across the CHARM-EU Alliance.*

Module content and activities were developed collaboratively by six ESD Fellows (Carlos Rocha, Cicely Roche, Sarah-Jane Cullinane, John Gallagher, Clare Kelly, and Felix Mezzanotte) and four student interns, (Maryam Yabo, William Reynolds, Freddie Fallon and Tom Hegarty), as part of TCD's 'Enacting Education for Sustainable Development in Trinity' programme in 2023-2024. A wide range of students and staff actively engaged with and impacted positively on piloting and continuous improvement of workshops during late 2023-2024. Content was edited to OER format by Mr Kevin O Connor at the **Centre for Academic Practice in TCD** (2025).

The work on the Enacting ESD module was funded by the National Forum/Higher Education Authority (Ireland) under the Strategic Alignment of Teaching and Learning Enhancement Fund.





Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

Webinar: 15th December 2025

Supported by CHARM-EU, this webinar-series shares learnings from Trinity College Dublin's (TCD) '*Enacting Education for Sustainable Development (ESD)*' staff development module in the context of the Joint Educational Activities (CHARM-ED) partnership between TCD, ELTE and UB (2025).

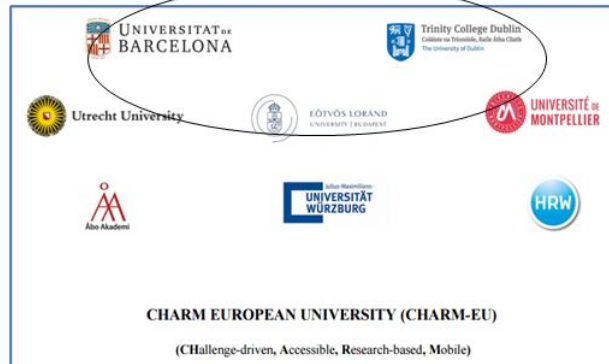
Enacting Education for Sustainable Development (ESD): spotlight on teaching practices for exploring *Worldviews, Perceptions and Values*.

*Webinar 1 of 3: Background to Enacting ESD Module Development in Trinity, and theory underpinning *Worldviews, perceptions and values* workshop design.*

- Dr Cicely Roche, ESD Fellow & Associate Professor, Practice of Pharmacy. rocheci@tcd.ie
- Module Co-Ordinator for Enacting ESD staff development module in TCD 2023-2024.

Charm-EU, CHARM-ED and (TCD+ELTE+UB) partnership

CHARM EUROPEAN UNIVERSITY : (CHallenge-driven, Accessible, Research-based, Mobile Eur Univ)



CHARM-ED project partners:

Dr Cicely Roche (Trinity College Dublin), Dr Mihaela Vancea and Dr Cristina Galván (University of Barcelona) and Dr Attila Varga, Dr Andrea Velich and Szilvia Szöllösi (Eötvös Loránd University).

<https://charm-eu.eu/charm-ed-projects/>

CHARM-EU Vision:

To create an innovative and flexible university model which embraces the change needed to meet society's challenges ...focused on identifying and solving specific challenges in close collaboration with the broader community.



<https://charm-eu.eu/about-us/mission-and-values/>

CHARM-EU

Educational principles

Sustainability

Challenge based learning

Transversal skills

Transdisciplinary

Research-based learning

Technology-enhanced

Student-centred

Situated learning

Transnational and
intercultural learning

Inclusivity



Aims of today's webinar (1 of 3):

1. To introduce and provide background and overview of the Module 'Enacting Education for Sustainable Development in Trinity', in the context of Trinity's / National / UNESCO strategies and approaches to teaching and learning, and
 2. To provide additional background to the *Worldviews, perceptions and values* theme in the Enacting ESD module, with particular emphasis on workshop design.
 3. To encourage discourse, debate, insight-sharing, collaboration!
- Please post questions as they arise – if others can answer any question posted, provide links to resources etc, it would be greatly appreciated. We will aim to allow the final 10 minutes for Q&A. Thank You.

Webinar 2 of 3, on Monday 19th January, will hear about the Students-as-Partners approach from our student partners, with particular focus on development, piloting and rollout of the workshops.

Webinar 3 of 3, on Monday 16th February, will showcase rollout of the module in format suited to first year students at Trinity Business school.



Aim(s): Enacting ESD CHARM-ED project

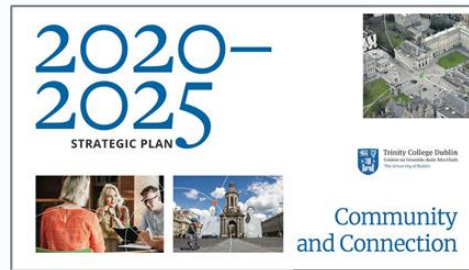
See the advert for this webinar at: ([LINK to the CHARM-EU events page](#))

The ‘Enacting Education for Sustainable Development (ESD)’ CHARM-ED project will:

- a) enable staff to experience, and then integrate into their teaching, the student-centred, action-oriented and transformative approaches envisaged in UNESCO’s preferred pedagogical approaches. This will include adaptation of resources previously used for professional development in Trinity to create a micro-credential format shareable across the CHARM-EU Alliance.
- b) focus on ‘*Exploring worldviews, perceptions and values*’ - one of five related blocks/themes collaboratively developed by an interdisciplinary staff-student team in TCD (2023-2024). With its emphasis on the case study *Mining in the Congo*, as developed by student interns, it drives learners to question their worldviews, perceptions and values related to sustainability dilemmas from community, policy maker and corporate perspectives. Having experienced the workshop process as a learner, ‘Enacting ESD’ includes facilitated exploration of the theoretical underpinnings, or pedagogical approach, used in workshop design in order to further support Teaching Practice development for those enacting ESD in their own contexts.



From strategic goals (2020) towards ‘transformation’



Goal 5:

We will shape our organisation and focus research around the challenge of achieving a sustainable and healthy planet.



Community and Connection

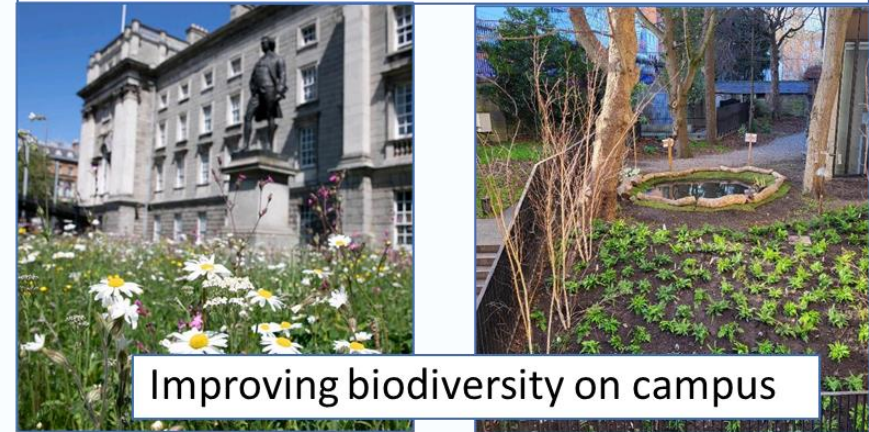


Vision

We will be a university, a place, and a community where climate change and biodiversity loss are addressed in a holistic, integrated and health-focused way to protect and restore our planetary home for future generations.

1. Thrive 2025-2030: <https://strategy.tcd.ie/>
2. Prof Jane Stout/ Provost update Nov 2025
3. <https://www.tcd.ie/sustainability/>

Transforming Learning Environments



Improving biodiversity on campus

Education Pillar TCD Sustainability Strategy

All Trinity students and teaching staff will be empowered to develop the knowledge, skills and attitudes necessary to act as agents of change, individually and collectively, in working for sustainable development within planetary boundaries.



How did we get here? – a students-as-partners approach 2023-24

October 2023:



ESD Fellows: John Gallagher, Dr. Cicely Roche and Dr. Carlos Rocha and Dr. Sarah-Jane Cullinane (2023-24) and Dr. Felix Mezzanotte (2023) / Dr Clare Kelly (2024).

Programme Director: Dr. Pauline Rooney,

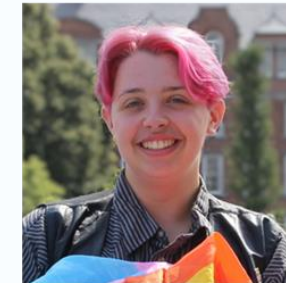
Programme Manager: Nicola Byrne.

Programme Sponsor: Prof. Jane Stout, Vice Provost for Biodiversity and Climate Action.

Student ESD Interns 2023-2024:



Maryam Yabo,
Studying PhD in Law



Freddie Fallon,
Studying Environmental Science & Engineering



Tom Hegarty,
Grad of Political Science & Geography

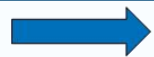


William Reynolds,
Studying Medicine



ESD Common Module Development, Beta-Testing & staff Pilot

Module Design



TCD policy 2023 (WG Jan to Apr '23):
Every student, within discipline, interdisciplinary, and aligned with TCD Graduate Attributes.



UNESCO pedagogical approaches:

- Learner centred approach.
- Action-oriented learning.
- 'Transformative' learning.

Co-created/beta-tested



Pilot May-July 24



Rollout in Trinity Business School (TBS) as a 5 ECTS junior fresh (first year) module in Sept 2024, **& 2025**, with >500 students each year.

ESD Fellows working with interested schools / departments / curriculum teams to extend delivery for 25/26+.



Align TCD's Graduate Attributes with Universal ESD principles

Key competencies for Sustainable development (UNESCO, 2017)

1. Systems thinking
2. Anticipatory
3. Normative
4. Strategic
5. Collaboration
6. Critical thinking
7. Self-awareness
8. Integrated problem-solving

Trinity's Graduate Attributes



CHARM-EU Educational principles

- | |
|--|
| Sustainability |
| Challenge based learning |
| Transversal skills |
| Transdisciplinary |
| Research-based learning |
| Technology-enhanced |
| Student-centred |
| Situated learning |
| Transnational and intercultural learning |
| Inclusivity |

Preferred Pedagogical approaches (UNESCO, 2017):

1. Learner centred approach
2. Action-oriented learning
3. Foster 'Transformative' learning



Enacting Education for Sustainable Development (ESD)

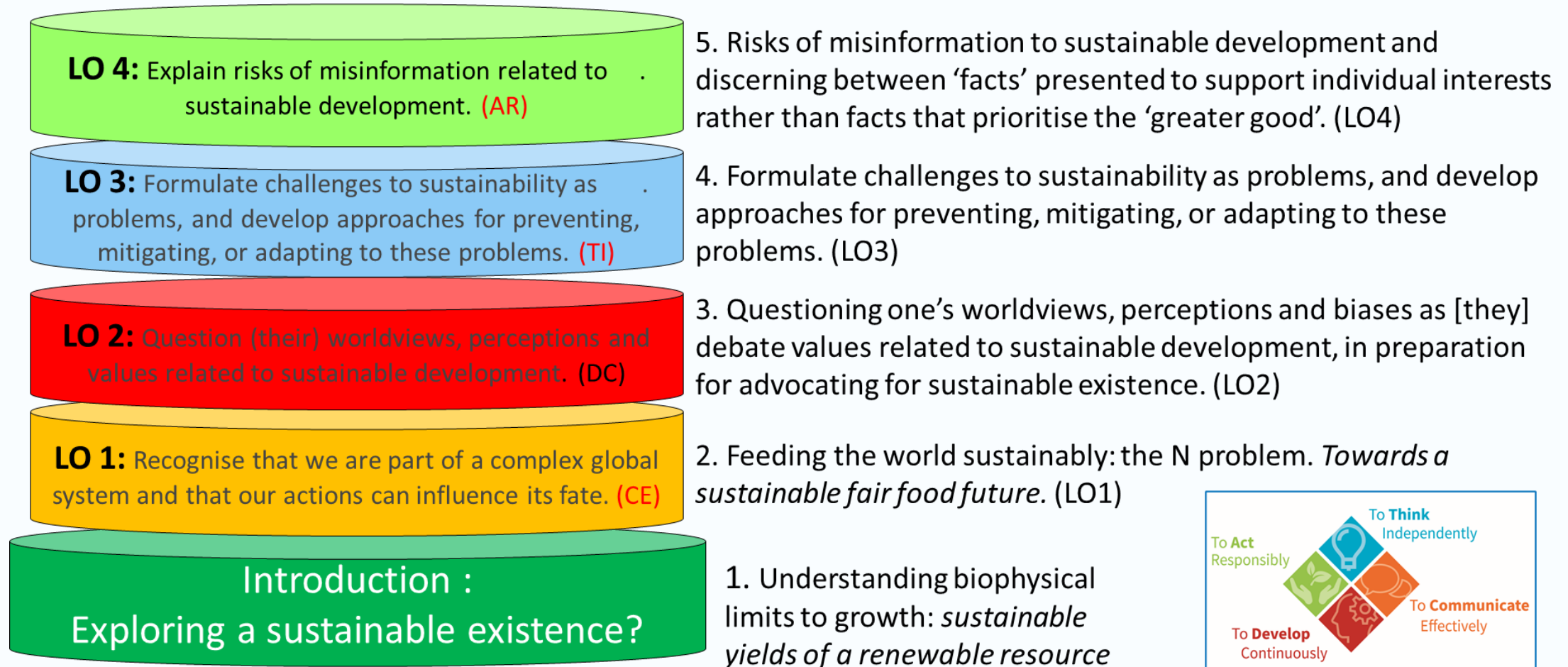
Structured around five integrated cross disciplinary themes as follows:

1. Exploring a sustainable existence.
2. Systems complexity and future forecasting in sustainability.
3. Exploring worldviews, perceptions, and values on sustainable development.
4. Problem framing in sustainability: prevention, mitigation, and adaptation.
5. Misinformation related to sustainable development.



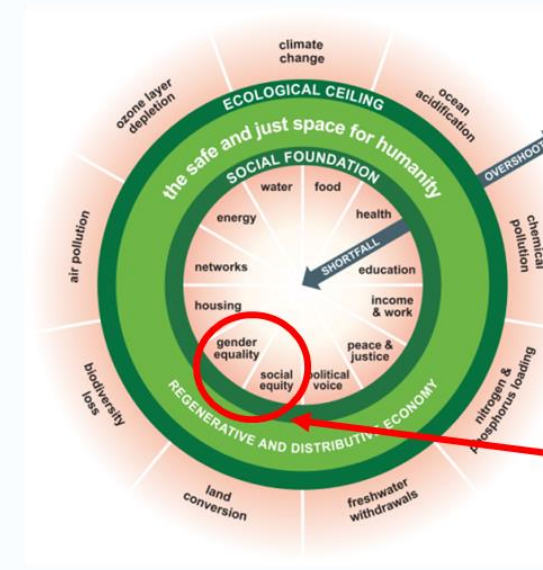
Novice level Module (5 ECTS)=cogent, interdisciplinary, introduction to enacting ESD

e.g. 5 Blocks as one module OR across multiple modules OR integrate to staff development? (4-5contact hrs)



Why did ESD aims include the module: Enacting ESD in TCD?

- ✓ Creation of a module that takes a **coherent** and **interdisciplinary** approach to ESD at novice level and could *empower all Trinity undergraduate students to think critically and share persuasively about the climate and biodiversity crisis.*
- ✓ Aligned with the **4 Trinity Graduate Attributes.**
- ✓ **Experiential** yet can deliver to **small or large numbers.**
- ✓ Could be delivered at **novice/foundation level** to **any** Trinity student for academic **credit.**
- ✓ Delivered as **5 ECTS** module (100-125 hours effort) or could be in **separate blocks of e.g. 1 ECTS each (20hrs)**
- ✓ Potential to adapt/ be delivered by **any teaching staff member or group of staff** regardless of previous ESD experience through their **own disciplinary lens.**
- ✓ Potential for all staff to engage – **academic, professional and technical.**



Prioritised in Block 1:

- Food, Water, Energy and Health

Prioritised in Block 2:

- Peace & Justice
- Networks

Prioritised in Block 3:

- Social Equity
- Gender equality

Prioritised in Block 4:

- Housing (shelter)
- Income & Work

Prioritised in Block 5:

- Education
- Political Voice.

'Critical Human Deprivations' shortfalls fundamental to life/existence (Food, Water, Energy, Health) **are introduced in Block 1).**

Source: Oxfam, inspired by Rockström et al, 2009:6.



Workshop 1 : Limits to growth - Let go fishing!

2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

Block 1: Exploring a sustainable existence

1. Individual response to 3 prompts then share and compare: e.g. what is a sustainable existence?
2. Fishing game – does system collapse?
3. Decision making based on two directives (minimum yield and continuous growth).
4. Contextualisation: what is a sustainable yield of a renewable resource?

Key Pedagogical approaches (UNESCO):

1. Learner centred approach
2. Action-oriented learning
3. Foster 'Transformative' learning



Acknowledge sources of images:

World Wildlife Fund, <https://youtu.be/bs2P0wRod8U> and <https://www.4ocean.com/blogs/notebook/6-harmful-overfishing-practices-and-types-of-gear>



Workshop 2 : The N problem- toward a sustainable food future

2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

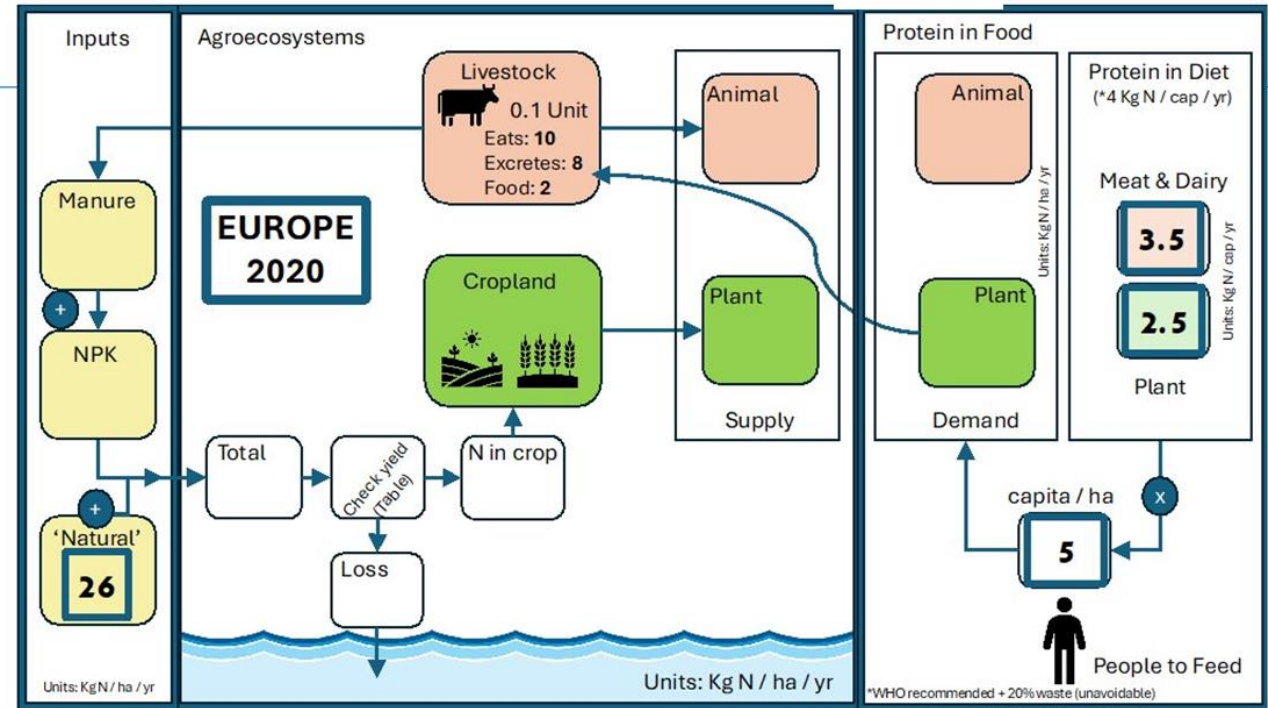
Block 2: Systems forecasting and complexity in sustainability.

1. Game of two food worlds. E.g. proportion of protein from animal/dairy compared with plant sources (European diet).
2. Decision making based on BAU (business-as-usual) or fostering a sustainable future.
3. Discussion of outcomes.
4. Contextualization: feeding humans

Key Pedagogical approaches (UNESCO):

1. Learner centred approach
2. Action-oriented learning
3. Foster 'Transformative' learning

How does the game work? [Dr Carlos Rocha 2024 ©]



Acknowledge source of image: Dr Carlos Rocha, TCD ESD Module Workshop 2, 2024



Workshop 3: DRC Cobalt mining industry challenges. Social Equity and Gender Equality

2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

Block/ Theme 3: Exploring Worldviews, Perceptions, and Values on Sustainable Development.

1. Three perspectives, one assigned to each group of 5:
 - Jane (worker, Mother of 2)= community perspective,
 - Grace = (CEO Sligo prosthetics company) =corporate
 - The DRC Minister of Mines = government/policy.
2. **Reasoning:** rate and rank 12 potential action options.
3. United Nations offers funding of \$5 million to address issues related to cobalt mining in the Congo. ---
 - One 'perspective' will control the funding.
 - Groups compete by making a 3 minute pitch
 - ...to the UN officer charged with making the decision.

Key Pedagogical approaches (UNESCO):

1. Learner centred approach e.g. rating and ranking challenges views
2. Action-oriented learning e.g. individual, then group agree ranking
3. Foster 'Transformative' learning e.g. compete for funding

Addressing the invisible labour behind the cobalt mining industry

An event held at the United Nations Headquarters on April 15 shed light on the harsh realities of the working conditions in the cobalt mining sector, marking the beginning of a concerted effort to promote global and sustainable changes in the industry. 29 April 2024



Acknowledge Source of images:

<https://www.ilo.org/resource/news/addressing-invisible-labour-behind-cobalt-mining-industry>



Workshop 4: Country B Infrastructure, social tensions and environmental degradation challenges as rapid influx of immigrants from Kiribati leads to rapid population rise in Country B.

2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

Block 4: Problem framing in sustainability: Prevention, Mitigation and Adaptation

1. Three Frames, one to each group of 5:

- **Infrastructure:** -housing, education and healthcare systems
- **Social Tensions:** -job competition, strain on social services, and cultural integration.
- **environmental vulnerabilities** due to increased land and water usage, and challenging waste and emissions management systems.

2. Government requires a problem statement and risk management strategy to be shared with wider group. **Focus on collaboration/shared goal.**

Key Pedagogical approaches (UNESCO):

1. Learner centred approach e.g. Contribute within defined Frame.
2. Action-oriented learning e.g. all members contribute to strategy.
3. Foster 'Transformative' learning e.g. collaborate to address crisis

Kiribati's 102,000 citizens are scattered across dozens of remote Pacific islands.... Tarawa, Kiribati's capital, is home to half the nation's population... most of the island is less than 2 meters (6 feet) above sea level. It, and the rest of the nation, may be uninhabitable within three decades. The government has purchased several thousand acres of land in Fiji, some 1,600 kilometers (994 miles) away, as a potential resettlement location.



Acknowledge sources of images:

<https://storymaps.arcgis.com/collections/af3858d32f84488f92dfaef068fff52?item=2>



Workshop 5 : Vaping –a challenge to health and environment

Identifying misinformation, understanding devious Frames and formulating upstream goals for Sustainable Dev
2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

Block 5: Misinformation related to sustainable development.

Workshop participants should be able to:

Task 1: Identify commonly applied misinformation related to challenging concepts in sustainable dev. **Groups are challenged to respond without being ‘rumbled’**, using one of Grant Ennis’ devious frames, to claims against them:

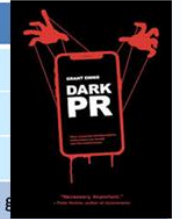
- Young Sustainable Lifestyle Influencer (Laoise),
- Young Communications executive (Jo) and
- Young Policy Advocate (SU representative - Alex)

Task 2: Agree (group) SMART (specific, measurable, achievable, relevant and time-bound) upstream goals which address misinformation related to sustainable dev.

Key Pedagogical approaches (UNESCO):

1. Learner centred approach e.g. role-play the use of devious frames
2. Action-oriented learning e.g. Formulate and share upstream goals
3. Foster ‘Transformative’ learning e.g. recognise misinformation

	Frame Name	Definition
BIG LIES	1. Denialism	There is no problem
	2. Post Denialism	What’s bad is good
	3. Normalisation	It’s not a problem, in fact, it’s normal
PANACEA	4. Silver Boomerangs	Pseudo solutions with negatives that cancel out g
	5. Magic	False dawns promised that never seem to materialise
	6. Treatment	Emphasise treating problems over preventing them
VICTIM BLAMING	7. Victim Blaming	Shift blame from policies causing the problems to the victims
COMPLICATED	8. Knotted Web	Everything is complex and has no clear solution
	9. Multifactorial	Devious frames that don’t work, do work if you combine them



> *Lancet Respir Med.* 2022 Jul;10(7):e63–e64. doi: 10.1016/S2213-2600(22)00187-4. Epub 2022 May 23.

From smoking to vaping: a new environmental threat?

Jérémie Pourchez ¹, Clément Mercier ², Valérie Forest ²



Acknowledge sources of images:

- The 9 Devious Frames: Ennis, 2023.
- Financial Times (2023). The environmental cost of single use vapes



Align TCD's Graduate Attributes with Universal ESD principles

Key competencies for Sustainable development (UNESCO, 2017)

1. Systems thinking
2. Anticipatory
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Trinity's Graduate Attributes



CHARM-EU Educational principles

Sustainability

Challenge based learning

Transversal skills

Transdisciplinary

Research-based learning

Technology-enhanced

Student-centred

Situated learning

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intercultural learning

Inclusivity

Preferred Pedagogical approaches (UNESCO, 2017):

1. Learner centred approach
2. Action-oriented learning
3. Foster 'Transformative' learning



CHARM-ED project Title: Enacting Education for Sustainable Development (ESD) in Higher Education: Guided by Theory, Grounded in Teaching Practice development

- Videos prepared as Open Education Resources (OERs)
- Guidance for educators using the Videos (OERs) for teaching purposes (Resource Guide).
- A shared language of learning theories (Milwood, 2021)
- Significance of the Congo as a case study
- Case study Sample: extracts from the community perspective
- Workshop resources available

Short summary of the project

This project aims to share and improve resources prepared for a professional development module: Enacting education for sustainable development, and plans to adapt its 'Exploring worldviews, perceptions and values' Theme, also referred to as a Block, into Micro-Credential (MC) format.

The project will enable staff to experience, and then integrate to their teaching, the student-centred approach and action-oriented learning, in pursuit of transformative learning, envisaged in UNESCO's preferred pedagogical approaches.

The module comprises five themes each of which was designed to stand-alone, and activities collectively align with the eight CHARM-EU principles. Resources available include case studies, workshop outlines, and videos.



Theme/ Block 3 in focus: Open Education Resources (OERs)

Available on : The Centre for Academic Practice, TCD (website).

www.tcd.ie/academicpractice/resources/education-for-sustainable-development/teaching-materials-for-esd/

Exploring Worldviews, Perceptions and Values on Sustainable Development

This theme explores worldviews, beliefs, values and some biases that typically frame judgements. Questions posed prompt reflection on how our worldview is likely to impact on our approach to sustainable development. Impacts of colonialism and capitalism on global equity and climate justice are considered. Decision-making frameworks that support reasoning through related dilemmas in an ethically defensible manner are outlined and reviewed.



Part 1 of 5:
Worldviews: How Do You See the World? Why does It Matter?
This video introduces worldviews – what they are, and how our worldview shapes our experience of reality. A range of contrasting worldviews, and their influence on our understanding of our place in nature, are examined.



Part 2 of 5: Beliefs, Attitudes and Values: Exploring Their Impact
This video introduces beliefs and attitudes – with particular emphasis on how they influence our perceptions and behaviours. Values, and how they inform our thoughts and influence how we interact with others, are explored.



Part 3 of 5: Colonialism and Capitalism Impacts on Climate Justice: DRC in Focus
This video discusses how the global economic model has created the intersecting and overlapping crises of social inequality and overshoot of planetary boundaries. The case study of the Democratic Republic the Congo is explored.



Part 4 of 5: Power, Privilege and Social Justice: Inequality and Climate
This video discusses some assumptions about the way in which the benefits and burdens of life on earth are divided up. Concepts of power, privilege and intersectionality are explored.



Part 5 of 5: Principles of Climate Justice: Framework for Addressing Inequality
This video asks what we can do to address intersecting global challenges and explores how frameworks such as the Climate Justice framework proposed by the Mary Robinson Foundation can support a just transition to a more stable world.

Interactive Lectorials for the theme

The two lectorials have been adapted to 5 short stand-alone videos (16 to 30 mins) [OER format], narrated by Dr Clare Kelly (ESD Fellow)

Guide for this Theme

This Resource Guide aligns with the five videos above for the theme titled: Exploring Worldviews, Perceptions, and Values on Sustainable Development. The videos provide key content related to the theme and this resource guide provides context and suggestions for integrating these videos to teaching practice that is learner-centred and action-oriented, and integrates to curriculum to foster transformative learning (UNESCO, 2017:55)



b) A resource Guide provides context and suggestions for integrating these videos to teaching practice that is learner centred and action oriented, and integrates to curriculum to foster transformative learning (UNESCO, 2017)

www.tcd.ie/academicpractice/resources/education-for-sustainable-development/teaching-materials-for-esd/



Inclusions in the Resource Guide aligned with OERs for Theme 3

All Resource Guides begin with a one-page background to the Enacting ESD Module

- Background to the theme: Exploring worldview, perceptions and Values for SD.
- Guidance for educators using this resource for teaching (for each of the 5 OERs/videos)
 - Part 1: Worldviews: How do you see the world? Why does it matter?
 - Part 2: Beliefs, attitudes and values: Exploring their impact on worldviews and behaviour.
 - Part 3: Colonialism and capitalism impacts on climate justice: History of the DRC in focus.
 - Part 4: Power, privilege and social justice: Inequality and climate produce worse outcomes.
 - Part 5: Principles of climate justice: A Framework for addressing inequality and climate justice.
- UNESCO Preferred Pedagogical Approaches:
 - Learner-centered approach, action oriented and (fostering) transformative learning.
 - Aligned with Millwood's learning theories, and related teaching practices.
- Recommended reading – one page list.



Guidance for Educators using this resource for teaching [Part ...2of 5]

Beliefs, attitudes and values: Exploring their impact on worldviews and behaviour.

Video (time)	Teaching Practice(s): options for: IP: in-person/in classroom teaching SO: synchronous online teaching	<u>UNESCO pedagogical approaches*</u> LCA: Learner-centred approach AOL: Action-Oriented Learning FTL: (Fostering) <u>Transformative Learning</u>
Video Part 2: (5.11)	Prompt question: What is a belief/attitude? Prompt consideration of terms. Ideally pair and share. Learners become aware of own and colleagues' beliefs and attitudes, and influences on the formation of beliefs and attitudes. [IP and SO]	LCA: Support knowledge acquisition related to beliefs and attitudes. AOL: Prompt reflection, and peer learning related to beliefs and attitudes. FTL: expand learner' range of perspectives
Video Part 2: (15:36)	Prompt question: What are values? Provide learners opportunity to individually and collaboratively consider values. Ideally pair & share. Learners become aware of own and colleagues' values, and how they impact on worldviews.	LCA: Prompt individual reflection on values & what underpins their formation. AOL: Require learner to 'state a position'. Enable share-and-compare with peers. FTL: Peer-discussion & comparators help expand learner's self-awareness re values.
Table is aligned with <u>Milwood's Learning Theories Map</u> : UNESCO ESD Preferred Pedagogical Approaches.		



A shared language of learning theories! (Millwood, 2021)

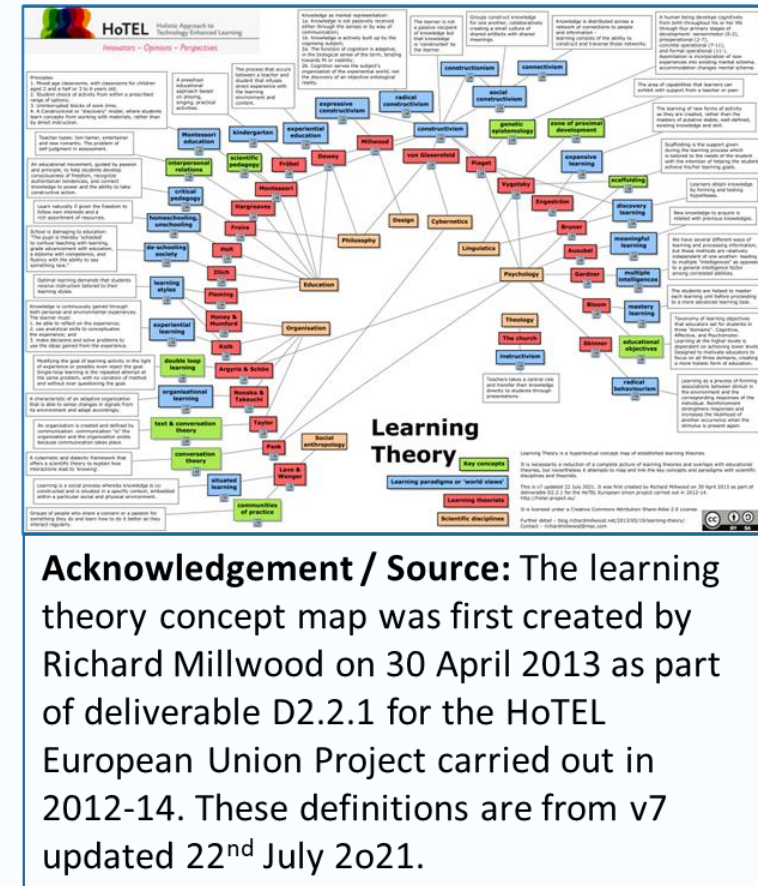
<https://blog.richardmillwood.net/wp-content/uploads/2013/11/Learning-Theory.pdf>

Constructivism: The learner is not a passive recipient of knowledge but that knowledge is 'constructed' by the learner.

Social constructivism: Groups construct knowledge for one another, collaboratively creating a small culture of shared artifacts with shared meanings.

Situated Learning: Learning is a social process whereby knowledge is co-constructed and is situated in a specific context, embedded within a particular social and physical environment.

Scaffolding is the support given during the learning process which is tailored to the needs of the student with the intention of helping the student achieve *their* learning goals.



UNESCO ESD Preferred Pedagogical Approaches (UNESCO, 2017:55)

Sample – Action Oriented learning (AOL)

UNESCO recommends	UNESCO (2017:55) Description	Examples of <u>Learning theories</u> * Teaching practices aligned with UN Preferred (Millwood, 2021:v7)
Action-oriented learning (AOL)	<i>In action-oriented learning, learners engage in action and reflect on their experiences in terms of the intended learning process and personal development. The experience might come from a project (in-service learning), an internship, the facilitation of a workshop, the implementation of a campaign, etc. Action-learning refers to Kolb's theory of the experiential learning cycle with the following stages: 1. Having a concrete experience, 2. Observing and reflecting, 3. Forming abstract concepts for generalization and 4. Applying them in new situations (Kolb, 1984). Action-learning increases knowledge acquisition, competency development and values clarification by linking abstract concepts to personal experience and the learner's life. The role of the educator is to create a learning environment that prompts learners' experiences and reflexive thought processes."</i>	<p>Learning Theories - examples:</p> <ol style="list-style-type: none"> 1. <u>Social constructivism</u>: (Ideally sequence peer interaction and debate after individual constructivism). 2. <u>Experiential learning</u> 3. <u>Situated learning</u> 4. <u>Communities of practice</u> <p>Teaching practices – examples:</p> <ol style="list-style-type: none"> 1. Rank less-than-ideal options individually, then require the small group to agree ranking of options. 2. Role-play/debate assigned perspectives 3. Problem framing 'real-world' issues. 4. Solutions focussed- from local to global: groups problem solve collaboratively.



Workshop 3: DRC Cobalt mining industry challenges. Social Equity and Gender Equality

2 Lectures, 1 Workshop. Optional tutorial. Each lecture and the workshop has related preparatory work.

Block/ Theme 3: Exploring Worldviews, Perceptions, and Values on Sustainable Development.

1. Three perspectives, one assigned to each group of 5:
 - Jane (worker, Mother of 2)= community perspective,
 - Grace = (CEO Sligo prosthetics company) =corporate
 - The DRC Minister of Mines = government/policy.
2. **Reasoning:** rate and rank 12 potential action options.
3. United Nations offers funding of \$5 million to address issues related to cobalt mining in the Congo. ---
 - One 'perspective' will control the funding.
 - Groups compete by making a 3 minute pitch
 - ...to the UN officer charged with making the decision.

Key Pedagogical approaches (UNESCO):

1. Learner centred approach e.g. rating and ranking challenges views
2. Action-oriented learning e.g. individual, then group agree ranking
3. Foster 'Transformative' learning e.g. compete for funding

Addressing the invisible labour behind the cobalt mining industry

An event held at the United Nations Headquarters on April 15 shed light on the harsh realities of the working conditions in the cobalt mining sector, marking the beginning of a concerted effort to promote global and sustainable changes in the industry. 29 April 2024



Acknowledge Source of images:

<https://www.ilo.org/resource/news/addressing-invisible-labour-behind-cobalt-mining-industry>



Significance of Congo as a Case Study

Students as Partners (SaP) – Maryam Yabo and William Reynolds, ESD interns, TCD

- The situation in Congo encapsulates numerous sustainability challenges, spanning from child labor and gender inequality to economic disparities and social injustice.
- By delving into these complexities, the scenario aligns with the objectives of Theme/Block 3, encouraging participants to identify and understand ethical concepts, values, contradictions, and biases in the context of sustainability.
- Participants will grapple with not only the immediate ethical concerns, such as child labor, but also the broader ethical dimensions related to economic systems, colonial legacies, and intergenerational justice.
- The scenario reflects the real-world implications of unsustainable practices, highlighting the interconnectedness of local and global issues and the importance of addressing them in a comprehensive and ethically defensible manner.



Scenario 'Perspective 1' (Prewrite): Community Perspective

In a rural community in Congo, severe injuries and death are a frequent consequence of dangerous working conditions in the local mines that supply cobalt to manufacturing companies abroad, predominantly for use in electric car batteries.

Families struggle to make ends meet, and despite risks of gender-based violence, many rely on sending both sons and daughters to work in the mines to support their households. Out of the 200,000 Congolese mining for cobalt, 40,000 are Children, some as young as six years old. Cobalt miners earn less than \$2 per day. Mine workers are also exposed to excessive amounts of toxic cobalt dust.

The workers in local cobalt mines have collectively agreed to go on strike to demand safer working conditions. They have refused to work until mining companies address these issues and dangers. However, the strike has created economic hardship for many families who are now struggling to provide for their households.

Some community members contemplate going back to work in the unsafe mines out of economic necessity. As single mothers have limited alternative sources of income, they are particularly vulnerable to the economic impact of the strike and are disproportionately impacted by the strike.

You are Jane, a single mother and you previously worked in the mines with your two children, your son aged 7 and your daughter aged 12. Your family is now starving, you have not eaten in 2 days as there isn't enough food for all three of you. You also have no money left to pay for the room you are renting and you therefore risk eviction from the only shelter you have.

You do not want you or your children to go back to working in unsafe mines, or to starve or be evicted.

What should you do (next)? ('You' are Jane.)



Action options (behaviours) & Justifications (motivations)

e.g. You are presented with 12 potential action options for this scenario – representing actions at various levels of ‘defensibility’ from a ‘high’ of ‘Highly defensible’ to a ‘low’ of ‘not defensible’. Justifications relate to the single MOST preferred action option, and whether the justification named is of GREAT, SOME, MUCH, LITTLE OR NO relevance to the most preferred action choice.

Sample of action options to rate and rank:

- A. HD D Q ND :** Stay home because you feel guilty breaching solidarity with others on strike.
- B. HD D Q ND :** Go back to working in the unsafe mines along with your children so you can afford to eat and pay your rent.
- C. HD D Q ND :** Look for work in the local brothel as that is the only alternative source of income.
- D. HD D Q ND :** Sneak into the mines at night to steal some minerals that you can sell for income while on strike.

Dilemma(s):

Principle of solidarity in tension with Duty to children?

Other???

Sample of Justification options to rate and rank:

- **G M S L N :** Those in positions of responsibility have a moral duty to protect vulnerable individuals and groups.
- **G M S L N :** The primacy of Solidarity as a guiding principle forces prioritisation of the greater good over an individual’s health.
- **G M S L N :** Children should have the right to basic needs without having to work in Mines.
- **G M S L N :** Meeting the needs of the current population is more important than being constrained by worrying about whether current actions will compromise the needs of future generations.



Inclusions in the Workshop Resources:

Printed templates for use before and during the workshop:

i.e. case studies, selection of relevant action/Justification options to rate and rank, session plans, workshop facilitator notes and some templates to support assessment processes.

- Community Perspective – Yellow;
- Corporate/ Business Perspective – Green;
- Government/Policy Perspective - Blue.



Guided by Theory: workshop Theme 3

Exploring Worldviews, Perceptions, and Values on Sustainable Development

- Intermediate Concept Measures (ICMs)
- Neo-Kohlbergian theory of Moral development – the four Component Model (FCM).
- Logic, Role-play and peer interaction and debate (Penn et al, 1990)
- Sequencing of activities drives development



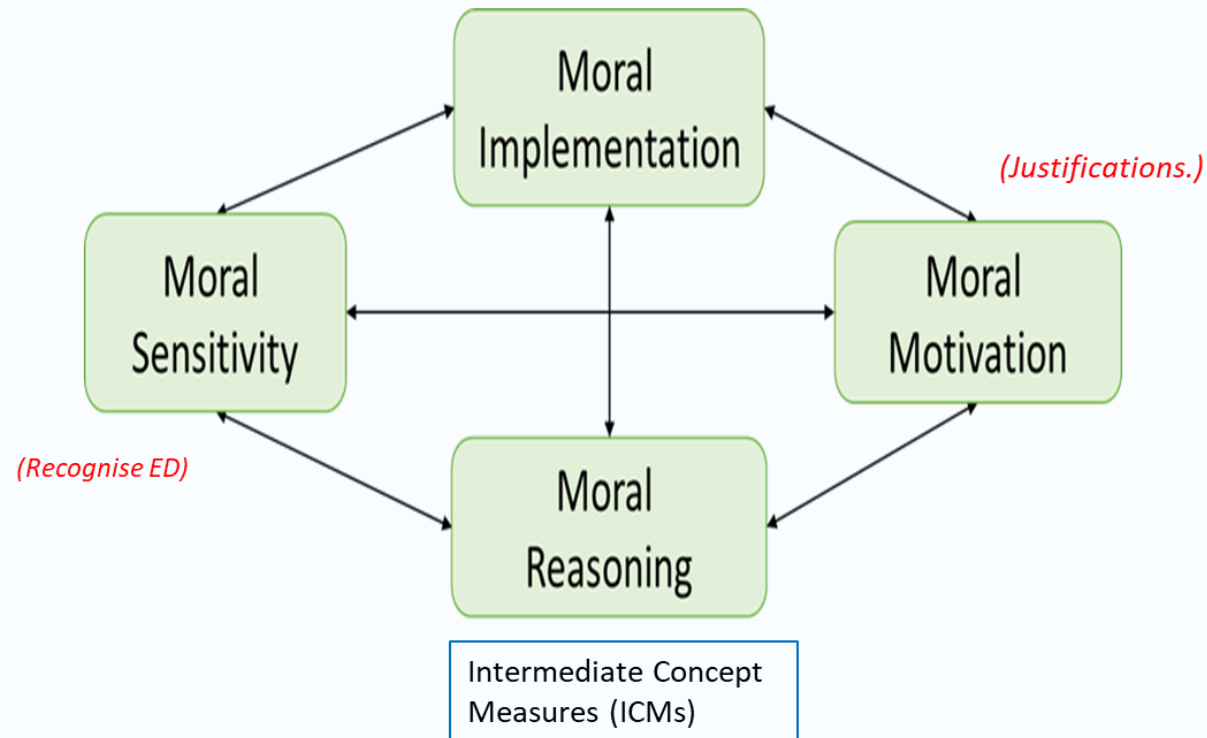
Developing (and assessing) 'Troublesome' Attributes: Intermediate Concept Measures (ICMs)

Aim (of this section) is to share experience of an assessment (and learning process) that:

- seeks to enable development and demonstration of competencies underpinning ethical/moral dilemma resolution...
- **by incorporating into activities:**
 - (a) 'independent thinking' regarding a dilemma scenario,
 - (b) then forcing decision-making through ambiguity and
 - (c) then, having made 'independent' decisions, task-driven peer discussion and debate to 'resolve' the dilemma;
- Assessment should be/ is generally supported by rubrics, observation of behaviours, and when online, options generally used are journals and group discussion forums;
- The methodology is aligned with underpinning Neo-Kohlbergian theory and evidence base regarding Moral Development.



Neo-Kohlbergian theory of Moral Development (Rest et al, 1999)



Teaching ethics – a direct approach (Penn et al, 1990)

Logic: <i>(8 x ESD competencies or 17 SDGs)</i>	Learn ESD frameworks with which to review and decision-make through apparently intractable professional dilemmas.
Role-play	Review ESD related ethical dilemmas in a structured manner and consider a range of perspectives that might be taken.
Peer interaction	Create opportunities to network with colleagues to review the resolution of ESD context-specific dilemmas.



Intermediate Concept Measures (ICMs)

(Bebeau & Thoma, 1999; adapted for T&L - Roche & Thoma, 2017; Roche et al, 2017)

The components of an ICM :

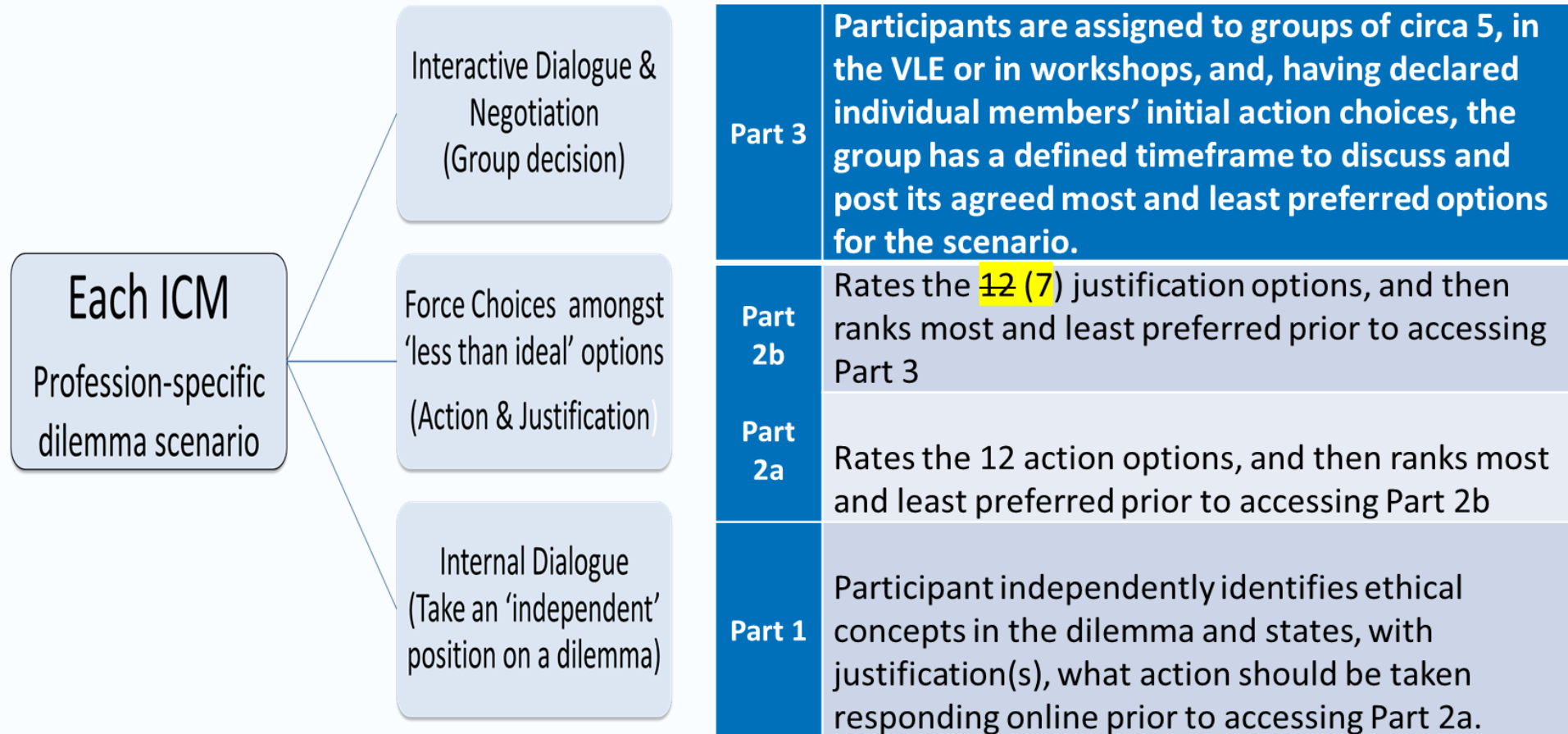
- a short context or profession-specific [ESD] / problem-specific 'dilemma' scenario, and series of action and justification options.
- dilemmas include relevance to ethical principles e.g. Respect for autonomy and to intermediate concepts e.g. vulnerable person(s) or societal best interests; [generally 200 to 350 words – with or without videoclips)
- The case study, action choices and justification options are presented in sequence [prefer 12 options for actions and for justifications when for T&L, but 4 to 7 generally sufficient when used for assessment only].
- Options proposed should include samples with a focus on self interest, maintaining rules and norms, and 'vulnerable person' and/or societal interests. None of the options should be 'ideal'!



Sequencing of activities drives 'development'. **Need Interaction/debate.**

[Intermediate Concept Measures (ICMs) (Bebeau & Thoma, 1999; Roche & Thoma, 2017).

e.g. Individual constructivism/critical thinking; followed by decision-making through ambiguity, followed by social constructivism



Action learning... *a means of facilitating (and motivating) learners/students to engage*

1. Reflect individually (form an opinion, in your 'judgement', with the limited information you have – propose a course of action).
2. Choose amongst given options (Common language – to facilitate engagement with others).
3. 'Best' and 'worst' – facilitates discussion of 'unprofessional' or 'non-defensible' action options.
4. Interact with others [discuss, debate and negotiate with those who have different perspectives] to agree a group selection and/or prepare written advice to the individual in the scenario.
5. Reflect on individual, group and other groups' choices (Feedback session allows this further reflection – discipline/module co-ordinator dependent).

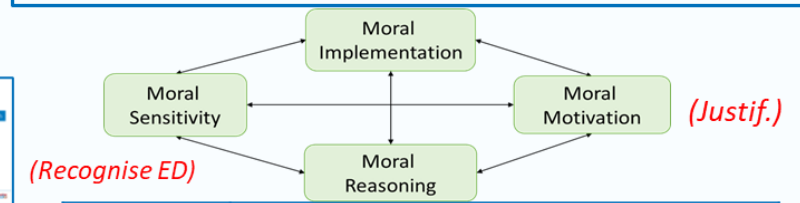


ESD Key Pedagogical approaches (UNESCO, 2017)

UNESCO (2017) Education for Sustainable Development Goals Learning Objectives
<https://unesdoc.unesco.org/ark:/48223/pf0000247444>



Neo-Kohlbergian theory of Moral Development (Rest et al, 1999)



UNESCO pedagogical approach	Curriculum 'decisions' (UNESCO)
Learner centred approach - active development of knowledge from the learners' own ' <i>starting points</i> '.	<u>Facilitator</u> stimulates & supports reflection on knowledge/facts and learning processes.
Action-oriented learning - learners engage in action/ activities and reflect on their experiences (Kolb, 1984: experience, observe and reflect, conceptualise for generalisation, apply in new situation).	<u>Facilitator</u> creates the learning environment that prompts learner experiences and reflexive thought processes.
'Transformative' learning – refers to the aim to e.g. empower learners to question and change the way they see and think about the world (Mezirow-general refs).	<u>Facilitator</u> scaffolds and drives the activities that challenge learners to alter their worldview, using learning theories such as constructivism

Logic: (8 x ESD competencies or 17 SDGs)	Learn ESD frameworks with which to review and decision-make through apparently intractable professional dilemmas.
Role-play	Review ESD related ethical dilemmas in a structured manner and consider a range of perspectives that might be taken.
Peer interaction	Create opportunities to network with colleagues to review the resolution of ESD context -specific dilemmas.



Alignment: learning outcomes, activities and assessment e.g.

Learning outcomes/ Competencies to be assessed	'evidence' that student has demonstrated behaviour(s)	Assessment <i>of//for/as</i> learning?
Evidence of independent and critical thinking with respect to a dilemma incorporating ESD/ 'sustainability' issues.	Short answers to e.g.: what are the ESD/ sustainability concepts at risk/ what would you do?/ justify your choice of action?	Guide student and assessor with detailed rubric(s) and require students to subsequently share individual responses with his/her group
Decision-making through ambiguity while engaging with a range of perspectives on a continuum from unprofessional behaviours to highly defensible behaviour related to ESD / 'sustainability' scenarios.	Require rating and ranking of action options and the educator may follow with justification options in respect of the most preferred action option.	'Moral/ethical judgement' required to rate and rank 'less than ideal' behaviours, while justification options explore motivations and intentions underpinning behaviours.
Assigned to groups of 5-7, and are 'required to agree most and least preferred options, in a defined time-frame. Evaluate if they work as a team to reach agreement on ESD scenario(s).	The decision the group identifies, whether the group is explicit in ranking of options and the process of reaching agreement can be evaluated.	Identify whether choices align with 'experts'. The assessor can 'track' individual to group choices. Process of reaching agreement can be evaluated.
Group prepares advice for the 'protagonist(s)' in the scenario.... Or other 'artifact' as preferred by the module leader/ as aligns with overall assessment strategy .	The 'advice' or other artifact and, where feasible, the process of teamworking can be reviewed for alignment with ESD competencies and TCD Graduate Attributes.	Evaluate if the 'advice' itself, and the teamworking process, align with expectations related to Sustainability and with ESD competencies.



References – The four component model and use of ICMs

- Bebeau, M.J. & Thoma, S.J. (1999). “Intermediate” concepts and the connection to moral education. *Educational Psychology Review*. 11:343-360.
- Penn, W.Y. Teaching ethics – a direct approach. *J Moral Educ*. 1990, 19(2), 124-138.
- Rest, J., Narvaez, D., Bebeau, M.J. & Thoma, S.J. (1999). *Post-conventional moral thinking: A Neo-Kohlbergian approach*. Mahwah, NJ: Erlbaum.
- Rest, J.R. & Narvaez, D. (1994). *Moral development in the professions: psychology and applied ethics*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Roche, C., Flood, M., Lynch, M., & Sahm, L.J. (2019). Balancing Assessment with “In-Service Practical Training”: A Case Report on Collaborative Curriculum Design for Delivery in the Practice Setting. *Pharmacy*. 7(3), 93. <https://doi.org/10.3390/pharmacy7030093>
- Roche, C.; Thoma, S.J.; Grimes, T.; Radomski, M. (2017) Promoting peer debate in pursuit of moral reasoning competencies development: spotlight on educational intervention design. *Innovations in Pharmacy*. 8(4), Article 2. <https://doi.org/10.24926/iip.v8i4.928>
- Roche C, Thoma SJ. (2017) Insights from the Defining Issues Test on Moral Reasoning Competencies Development in Community Pharmacists. *American Journal of Pharmaceutical Education*. (7): Article 5913. <http://www.ajpe.org/doi/pdf/10.5688/ajpe5913>
- Schlaefli, A.; Rest, J.R.; Thoma, S.J. Does moral education improve moral judgment? A meta-analysis of intervention studies using the Defining Issues Test. *Rev Educ Res*. 1985, 55(3), 319-352
- Treleaven, L. and R. Voola. (2009). Integrating the Development of Graduate Attributes Through Constructive Alignment. *Journal of Marketing Education*, 30(2), 160-173



Thank you for joining today!

Save the date for the upcoming two EESD webinars:

19 January 2026, 11:00 AM CET - [link](#)

16 February 2026, 11:00 AM CET - [link](#)