Embedding Sustainable Mindset Principles in enterprise education: a Toolkit for practitioners

University of Derby

16 JULY 2025

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Sustainable Business and Green Growth
Cluster, Derby Business School

(WELCOME FROM ORLA KELLEHER,
Senior Lecturer in Responsible Management
PRME Lead & PRME Midlands facilitator
Derby Business School)

UNIVERSITY OF DERBY

TEF
2023
Gold

Agenda of the day

- 10:05 – 10:15 | Introduction to the SMP-EEUK Project and Workshop Aims

- 10:15 – 11:30 | Embedding Sustainability Mindset Principles in Enterprise Education: Practical Experiences

- 11:30 – 11:45 | Comfort Coffee Break

- 11:45 – 12:45 | Developing and Measuring Students' Sustainability Competences & Mindset

- 12:45 – 13:30 | Networking Lunch

- 13:30 – 14:45 | Integrating SMP Tools in Assessment/Programs: Toward Authentic Student Evaluation

- 14:45 – 15:00 | Workshop Close & Next Steps (Followed by Optional Social Activity in Derby)

Project team and funders

Project Team

Barbara Tomasella (b.tomasella@derby.ac.uk) University of Derby (PRME SMP Working Group)

Anne Wylie (a.wylie@derby.ac.uk) University of Derby

Michelle Littlemore (michelle.littlemore@northumbria.ac.uk) Northumbria University

Richard Howarth (richard.Howarth@ntu.ac.uk) Nottingham Trent University

Catherine Brentnall (c.brentnall@mmu.ac.uk) Manchester Met University (EEUK Director)

Karen Cripps (kcripps@brookes.ac.uk) Oxford Brookes University (PRME Steering Group)

Orla Kelleher (O.Kelleher@derby.ac.uk) University of Derby (PRME Midlands)

Chris Moon (C.Moon@mdx.ac.uk) Middlesex University (EEUK Fellow)

Funders:

Enterprise Education UK (Impact Fund)

Pedagogic Research Cluster at University of Derby

PRME UK & Ireland (Innovative Pedagogy Competition)

PRME Links

[Responsible Management Education | UK & Ireland PRME](#)

I recommend you sign up to the PRME UK&I newsletter as that will keep you updated on events

For anyone wanting to know which PRME chapter to join, please look at the following link
[Local Networks | uki-prme](#)

Anyone wishing to join the PRME Midlands chapter, contact Orla Or Jay
 Midlands Local Network Local Network Coordinators: Orla Keller & Jaliyyah Bello
Contact Details: ab0144@coventry.ac.uk and O.Kelleher@derby.ac.uk

About the Sustainable Mindset Principles

Also for anyone wishing to join the UN PRME Working Group on Sustainability Mindset led by Dr Isabel Rimanoczy see link here. You will see opportunities for attending training events on Sustainability Mindset Indicator and more.

PRME Working Group on Sustainability Mindset | UNPRME

Training to become a Sustainable Mindset education practitioner:

https://www.unprme.org/prme-working-group-on-sustainability-mindset/sustainability-mindset-principles-action-lab-1-4/

About the Sustainable Mindset Principles

Enterprise and Entrepreneurship Education for a Sustainable Society

SPECIAL INTEREST GROUP

Enterprise Educators UK

Enterprise and Entrepreneurship for a Sustainable Society

This group is dedicated to empowering Enterprise Educators to play a key role in shaping a more sustainable future. By addressing the interconnected challenges of social, environmental, and ecological sustainability, the SIG supports educators in driving meaningful change and fostering innovative solutions.

Join here: https://www.enterprise.ac.uk/sustainability-sig/

EEUK Research Project background

Enterprise and Entrepreneurship Education:
Guidance for UK Higher Education Providers
January 2018

QAA

AdvanceHE   QAA

Education for Sustainable Development Guidance

March 2021

QAA MEMBERSHIP

Subject Benchmark Statement
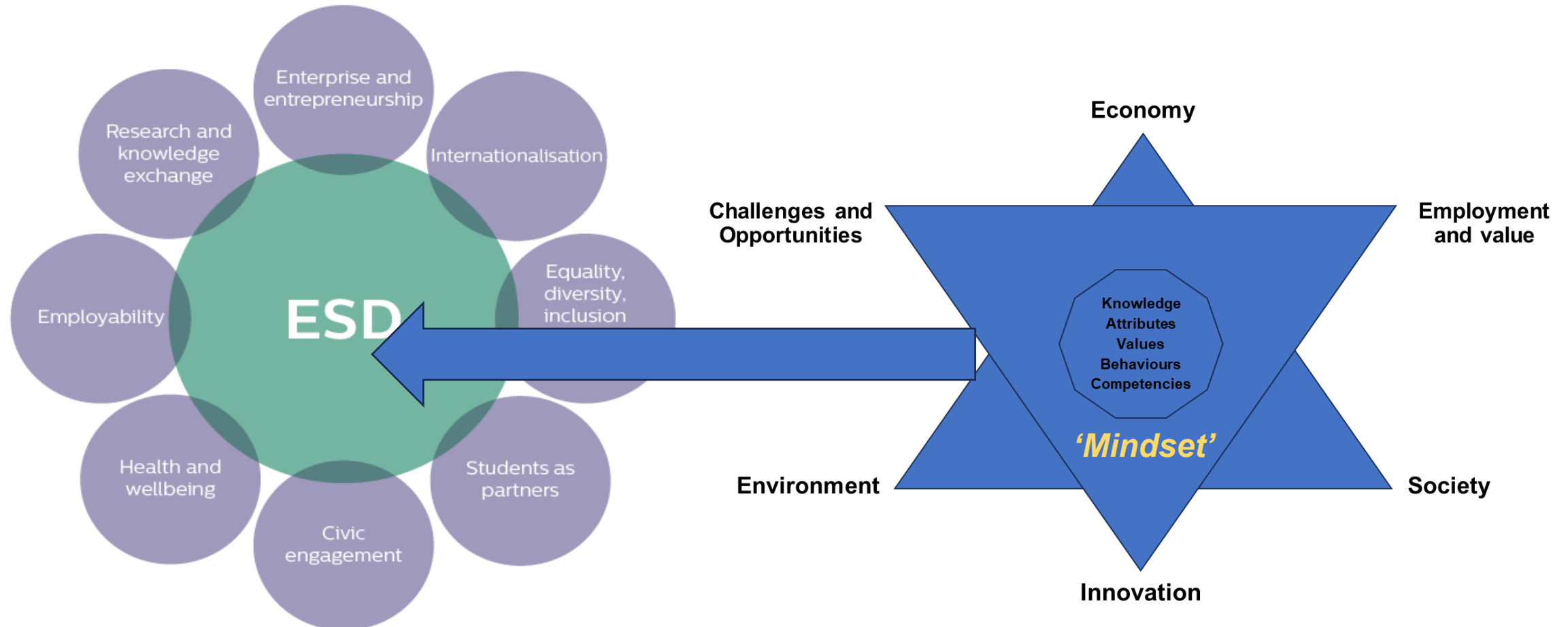
Business and Management

March 2023

TARGET   4·7

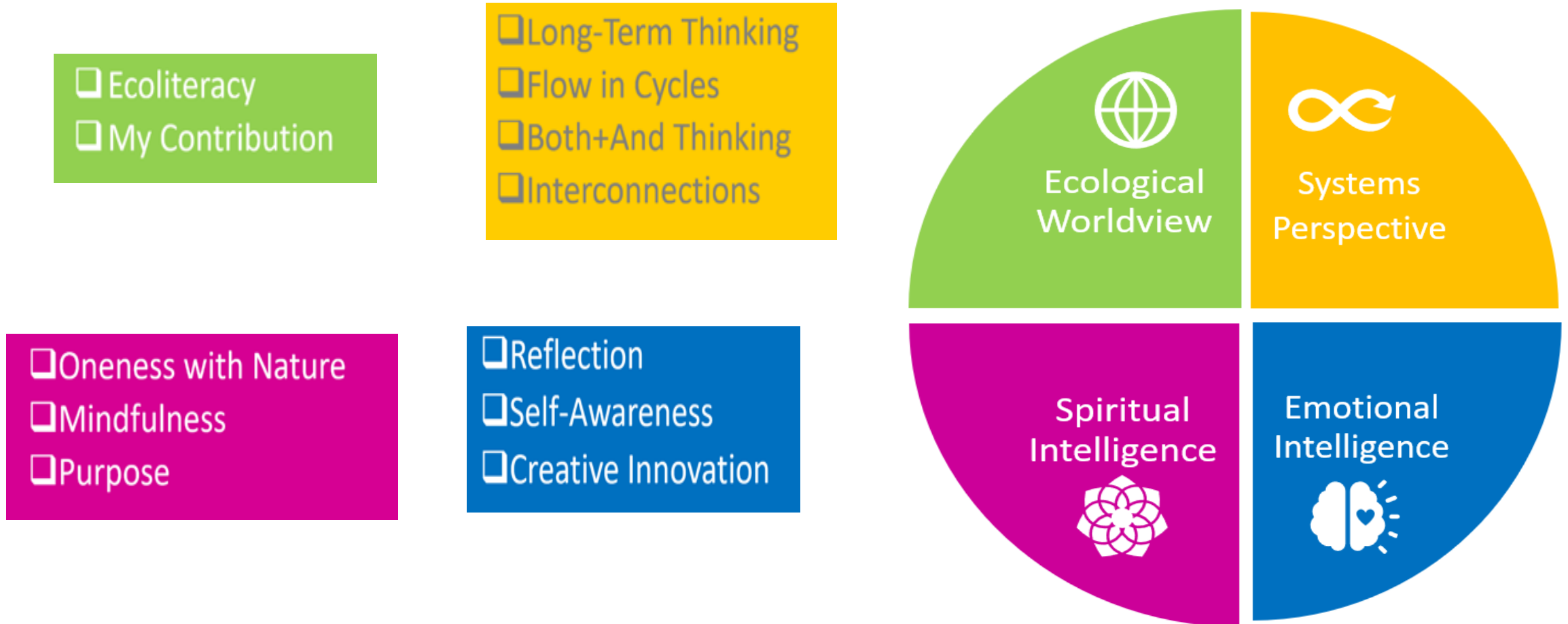EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP

"By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles (...)".

Project Aim: Integrating EE and ESD

A Sustainable Mindset informed toolkit for Enterprise Education has various advantages and benefits (Moon et al., 2019; Principles of Responsible Management Education (PRME), 2015; Rimanoczy, 2020; Rimanoczy & Ivanova, 2021; Tavanti et al., 2018), particularly in aligning the EE curricula to the Sustainable development goals

Sustainability Mindset – A way of thinking, being and behaving for the greater good

- Ecoliteracy
- My Contribution

- Long-Term Thinking
- Flow in Cycles
- Both+And Thinking
- Interconnections

- Oneness with Nature
- Mindfulness
- Purpose

- Reflection
- Self-Awareness
- Creative Innovation

Ecological Worldview

Systems Perspective

Spiritual Intelligence

Emotional Intelligence

Positioning the Sustainable Mindset Principles within Enterprise Education

Learning in the curriculum - examples

Formal education 'about' enterprise and employability or guided assignments that raise awareness

Education 'for' enterprise. Opportunity centred learning and creative problem solving that integrates business and e-learning

Group and individual projects / venture planning / innovation and design-based tasks, work placements and experiential & reflective contextualized learning

Self directed negotiated learning such as dissertations, projects and consultancy – ideally with external input and influence

Enterprise Awareness Understanding what enterprise means to me

Developing Entrepreneurial Mindset Participating in enterprising learning & activities

Developing Entrepreneurial Capability Developing Capability & confidence through guided experience and practice

Entrepreneurial Effectiveness Independent self-direction / Progressing individual goals & approaches

Ecological Worldview

Systems Perspective

Spiritual Intelligence

Emotional Intelligence

Specialist Start Up Units, Careers support, Student Union support and enterprise society interactions. Social media and distributed media.

Business ideas generation, competitions, careers guidance and development of social and career networks. Enterprise Society events and engaging with business

Taking responsibility for social enterprise and community-based projects, organising activities and events. Student representation roles and engaging with business

Pre-incubation and venture planning, venture creation, coaching and being coached, internships and pro-active networking
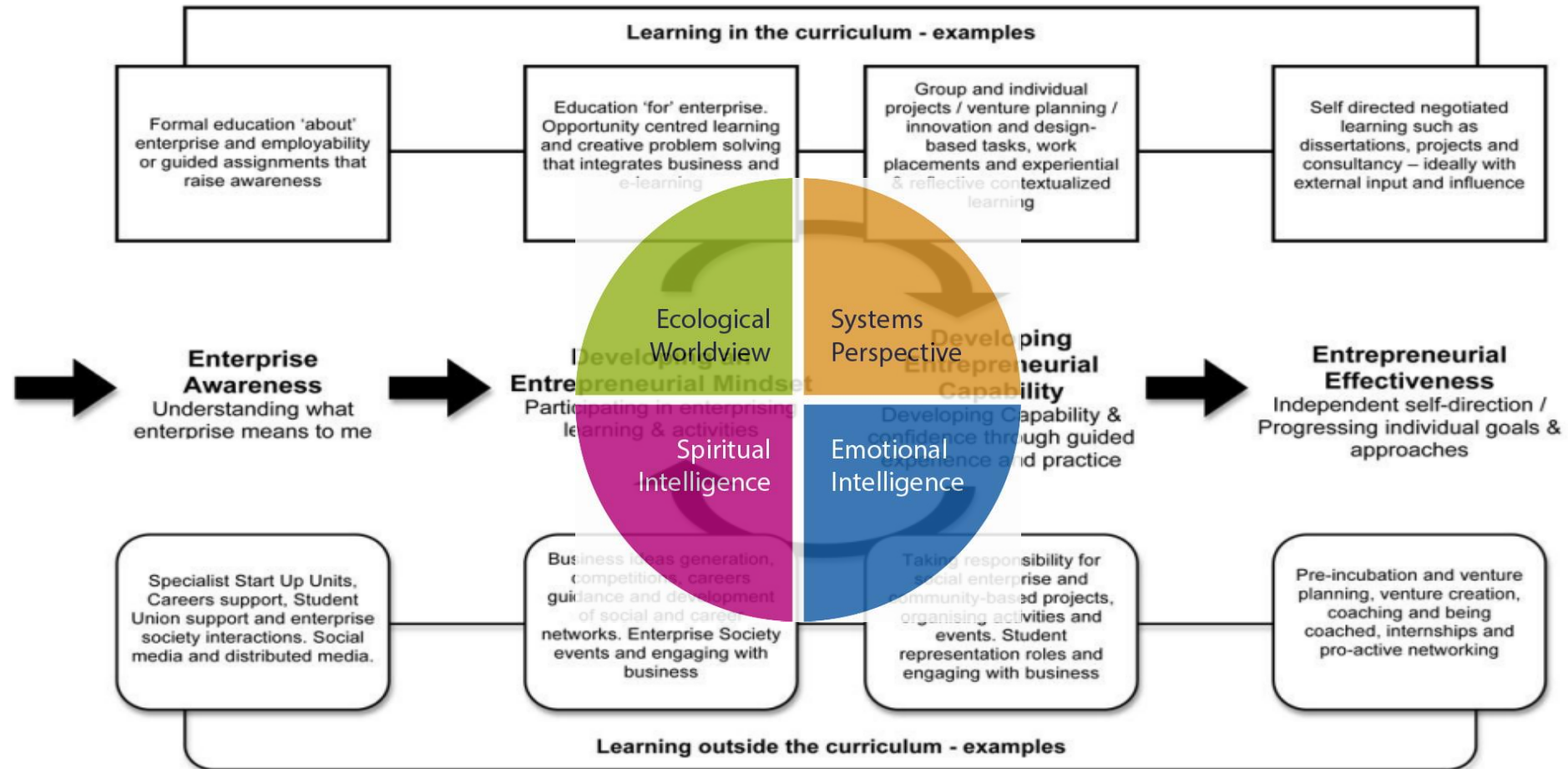
Learning outside the curriculum - examples

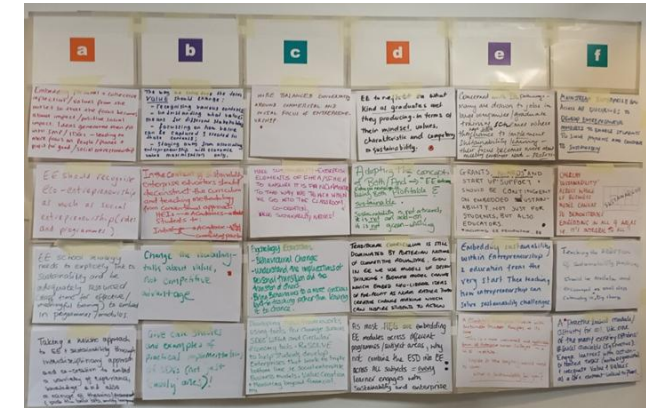## Figure 1: Developing entrepreneurial effectiveness

Methodology Overview

This study uses an **action research** approach, enabling iterative development, evaluation, and critical reflection on practice to bridge research and educational impact.

- It began with a **Systematic Literature Review** (SLR) of 199 peer-reviewed publications from Scopus (2007–2023), focused on entrepreneurial education and sustainability mindsets (Autumn 2023)
- Building on the SLR, **Phase 1 involved 2 workshops** (one onsite and one online) with 50+ enterprise educators to develop a toolkit of 10 active learning tools. Feedback informed refinement of the toolkit (Spring 2024)
- In **Phase 2, five tools were tested in UK HEI students** within the Business Management / Enterprise discipline. Pre- and post-questionnaires measured the development of students' sustainability competence, with 144 matched full responses (from a total of 266 pre and 181 post respondents). (Spring 2025)

Phase 1 of the Project: Creating an SMP toolkit for enterprise education

Barbara Tomasella, Senior Lecturer in Marketing
Co-Lead Sustainable Business and Green Growth Cluster, Derby Business School

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Mindset | Student drivers | Challenging conventions in EE | System levers | Where we deliver | How we deliver

Mindset	Student drivers	Challenging conventions in EE	System levers	Where we deliver	How we deliver
Embed personal and collective reflection from the outset so focus becomes positive social impact	Connect EE to jobs with the opportunity to implement sustainability	Traditional curriculum is still dominated by the narrow nature of competitive advantage. In EE models of design thinking and business model canvas which embed neo-liberal ideas of for profit as more rather than creative/value making which can inspire students to solve	Grants, awards and start up support should be contingent on embedded sustainability	EE and ESD should be applied across all subjects - so that every learner engages with sustainability and enterprise	Give case studies and examples of practical implementation - not just the 'cuddly ones'
A mandatory enterprise module with the SMP at its core. Include 'what is sustainability for you/	Focus on behaviour change and personal decision making strategies	Change the vocabulary to social value not competitive advantage	Include sustainability into FHEA SFHE applications	Embed sustainability within EE from the start. Then teach how entrepreneurship can solve sustainability challenges	Overlay sustainability across whole of business model canvas embedding in all 9 areas to show its integral to all
Mainstream enterprise across all disciplines to develop entrepreneurial mindsets to enable students to solve problems and contribute to sustainability	Use tools for change such as RESOLVE to help students develop enterprises that have positive social and environmental impact	EE should adopt the concept of Both,and, profitable and sustainble	School strategy in relation to EE needs to explicitly link to Sustainability and be adequately resourced Build into programmes and LO's Embedding does not mean hiding, it needs to be explicit Needs to drill down to targets, ratings and accreditations	Teaching the adoption of sustainability practices should be modular and encouraged as small steps towards big change	Be holistic through interdisciplinary approaches and co-creation - use variety of experiences, knowledge, range of theories/frameworks, pick the best bits...
EE to reflect on what kind of graduates they are producing in terms of their mindset, values, characteristics and sustainability competency		EE should become more practice oriented	EE should recognise practice as fundamental to Enterprise and Entrepreneurship Education EE should recognise entrepreneurship as much as social entrepreneurship	A practice based module for all. E.g. Erasmus to engage learners with action oriented tasks within organizations, and integrate value and values as a core element linked to plans	
Apply psychology in education e.g. behavioural change, to understand personal transitions and the transitions of others, bring behaviours to a more conscious level rather than leaving to chance	The way we introduce the semi value of social change, recognising various contexts, understanding other values held by different stakeholders, focussing on how value can be captured and created in all those contexts, staying away from associating entrepreneurship with economic value maximisation only			EE should deconstruct the curriculum	

Web of Life (Ecoliteracy) | Climate activist (My contribution)

Dualism (Both and Thinking) | Integrative (Both and Thinking)

Generations (Long term thinking) | Meaning (Purpose)

SMP Toolkit

Ecological Worldview

Systems Perspective
Changes in the state of the system
Ramifying effects
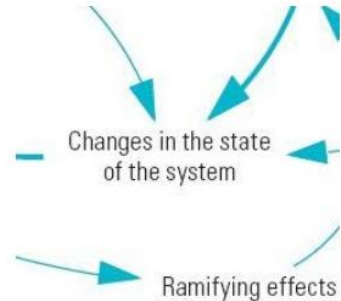
Emotional Intelligence

Spiritual Intelligence

Sustainability Mindset Toolkit (published in Sept. 2024)

An overview of the 10 tools

DIMENSION: ECOLOGICAL WORLDVIEW

- Opening Minds to Change (aligned with the *My Contribution* principle)
- Reflexive Sustainability (aligned with the *Ecoliteracy* principle)

DIMENSION: SYSTEMS THINKING

- Both-And Thinking (aligned with the *Both-And Thinking* & *Cyclical Flow* principles)
- Make Your Place (aligned with the *Long-Term Thinking* principle)
- Leading Responsibly (aligned with the *Interconnections* principle)

DIMENSION: EMOTIONAL INTELLIGENCE

- Career Storytelling (aligned with the *Self-Awareness* principle)
- Reflection Card Game (aligned with the *Reflection* principle)
- Game Changer Innovation Programme (aligned with the *Creativity* principle)

DIMENSION: SPIRITUAL INTELLIGENCE

- Higher-Level Values for a Sustainable Future (aligned with the *Mindfulness* principle)
- Purpose-Driven Enterprises (aligned with the *Purpose* principle)

Please **download the tools** here: https://www.enterprise.ac.uk/develop/impactfund/

Reflexive Sustainability (Seeing in new ways)

Sustainability Mindset Tool Kit – REFLEXIVE SUSTAINABILITY		
Sustainability Mindset Principal Themes addressed:	**Enterprise Educator Framework addressed:**	
ECOLOGICAL WORLDVIEW Eco literacy **SYSTEMS PERSPECTIVE** Long Term Thinking Interconnectedness **EMOTIONAL INTELLIGENCE** Reflection	Raising awareness of enterprise and entrepreneurship and its value to the learner in their journey	

Ecological Worldview | Systems Perspective

QAA Enterprise Themes addressed:	Group:	Learning Environment:
1. Creativity and Innovation 2. Opportunity and recognitions, creation, and evaluation 3. Decision making supported by critical analysis and judgement 4. Implementation of ideas through leadership and management 5. Reflection and Action 6. Interpersonal skills 7. Communication and strategy skill 8. Data and digital skill	• Small groups (3-5); number of groups decided by the number of 'perspectives' • Large Group final activity (all subgroups involved)	• Flat floor teaching / collaborative space • Carousel tables (small group working)

Title: Reflexive Sustainability

Objective:
- To provide students with an opportunity to visualise and verbalise sustainability issues as a prompt to action
- To provide students with an opportunity to reflect upon the perspectives and values of stakeholders
- To develop a deeper understanding of a real contextual problem through the lens of sustainability

Overview:
This workshop provides students the opportunity to take ownership of a real problem that they recognise from their lived experience. Using an auto-photography methodology as a prompt, the session uses student derived lived-awareness problem statements to initiate the activity (Thomas, 2009).
Author: Dr Carys Watts Newcastle University, UK Carys.Watts@newcastle.ac.uk

Practical experiences: SMP toolkit & other tools

10:15 – 10:45 | Carousel Session: Experience different SMP tools for enterprise education (Format: 2 x 15-minute slots; participants choose 2 slots to attend)

10:45 – 11:00 | Students' Voices: experience of the SMP informed classroom

11:00 – 11:15 | New Tool Showcase / 3 x 5 - minute elevator pitches with artifacts from presenters of other enterprise education tools

11:15 – 11:30 | Panel Discussion & Q&A / Moderated discussion with Session 1 presenters

Carousel Session: Experience SMP tools for enterprise education

(Participants choose 2 slots to attend: Slot 1: 10.15/10.30; Slot 2: 10.30/10.45**)**

Tables within this Active Room:

1. **Game Changer Innovation** (Creativity principle, Emotional Intelligence) with Dr Chinthaka Jay Aluthgama-Baduge, Senior Lecturer - Enterprise & Entrepreneurship, University of Derby **(TABLE 1)**
2. **Higher-Level Values for a Sustainable Future** (Mindfulness principle, Spiritual Intelligence), with Orla Kelleher, Senior Lecturer in Responsible Management, University of Derby **(TABLE 2)**
3. **Purpose-Driven Enterprises** (Purpose principle, Spiritual Intelligence): with Dr Thomas Long, Associate Professor in Sustainable Entrepreneurship, EDHEC Business School (Lille, France) **(TABLE 3)**

Tables Outside (in adjacent lobby area):

4. **Leading Responsibly** (Interconnections principle, Systems Thinking); with Michelle Littlemore, Assistant Professor in Project Management, Northumbria University **(TABLE 4)**
5. **Career Storytelling** (Self-Awareness principle, Emotional Intelligence); with Anne Wylie, Senior Lecturer in Business Management, University of Derby **(TABLE 5)**

Students Voices: experiences from the SMP informed classroom

Jose Malanga, Year 1 Business Management student
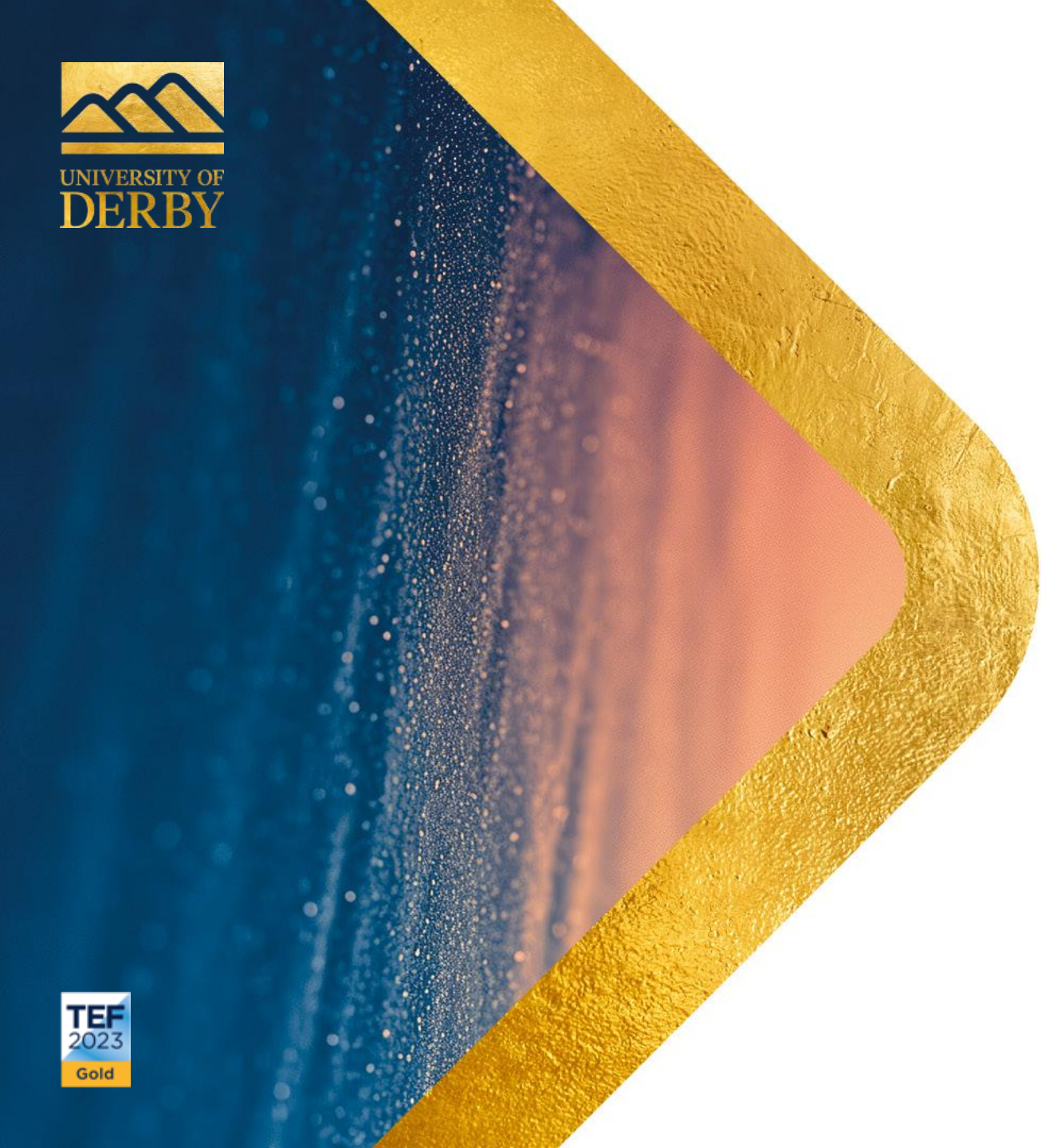
Ivan Zosimenko, Year 1 Business Management student

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Louise Griffiths, Year 1 Business Management student

Other sustainability learning tools' showcase

1. Climate Fresk (Ecological Worldview) with Cristina Iodice, Senior Lecturer in Marketing, Ravesbourne University

2. LEGO® SERIOUS PLAY® (Emotional Intelligence) with Dr Rebecca Beech, Senior Lecturer in Marketing, Oxford Brookes University

3. Using Systems and Design Thinking for SDG 11 (Systems Thinking); with Dr Sue Chui, Lecturer in Entrepreneurship, De Montfort University

Coffee break
(11.30 to 11.45 am)

Session 2: Developing and Measuring Students' Sustainability Competences & Mindset

11:45 – 12:00 | Quantitative Measurement Approaches in Business Schools: Testing the SMP Toolkit (Dr. Barbara Tomasella, Senior Lecturer, University of Derby.)

12:00 – 12:25 | Realist Approaches to Evaluating Sustainable Enterprise Education (Dr. Catherine Brentnall, Senior Lecturer, Manchester Metropolitan University)

12:25 – 12:45 | Exploring the connections between the Sustainable Development Goals, sustainability competencies and sustainability mindset (Dr Chris Ribchester, Associate Professor, University of Derby & Professor Ian Turner, University of Derby).

Phase 2 of the Project: Testing the SMP toolkit in the classroom

Overview of the Phase 2

Students' development was evaluated using UNESCO's eight key sustainability competences framework (Unesco, 2017)

Survey were collected during the academic year 2024-2025. Pre-Survey: 266 respondents; Post-Survey: 181 responses.

Students from diverse academic levels and world regions, all attending UK Universities and courses focused on entrepreneurship or employability.

Most tools in the SPM-EEUK toolkit were tested by at least one educator; Purpose, SDGs career storytelling, Leading Responsibly (Simulation), Game changer for Innovation, Card Game

Pre-Survey: Sust. Competences pre-activity

● Novice   ● Basic awareness   ● Moderate competence   ● Advanced competence   ● Fully competent

Systems thinking competency: I recognise and understand relationships, can analyse complex systems, can consider how…

Anticipatory competency: I understand and evaluate multiple outcomes, I can create my own vision for the future, I can apply…

Critical thinking competency: I question norms, practices and opinions; I reflect on my values, perceptions and actions; I take a…
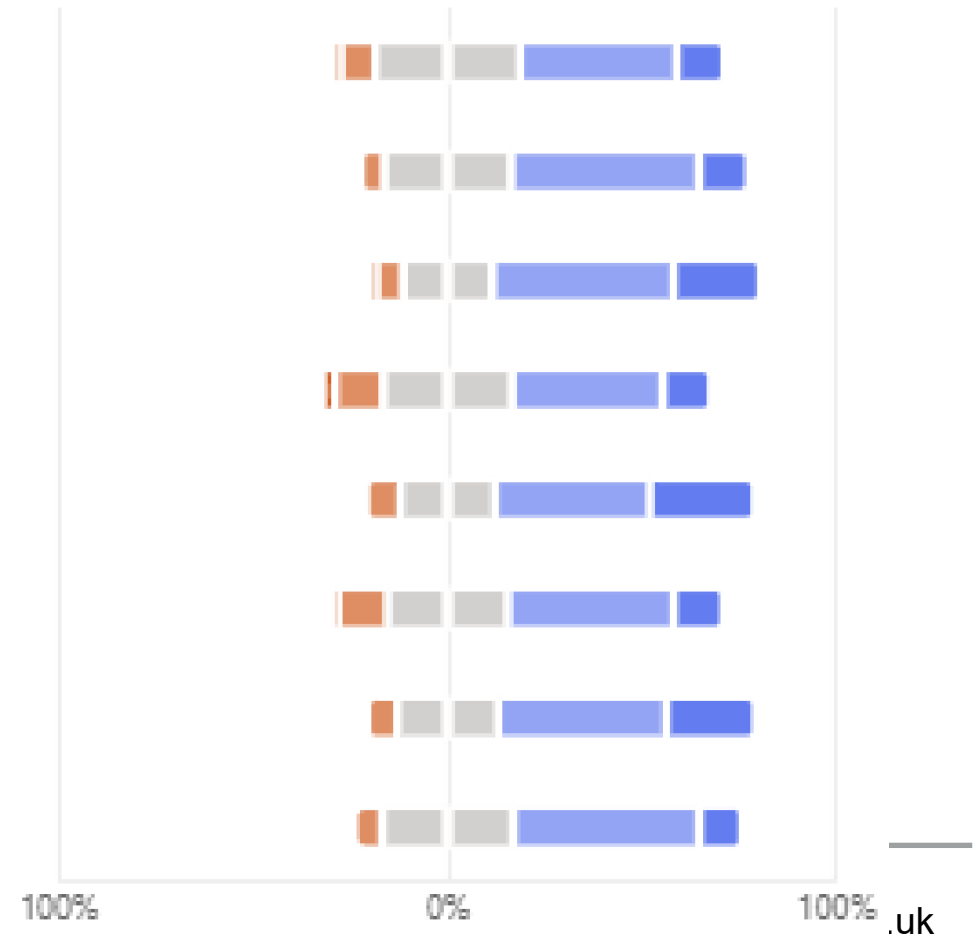
Strategic competency: I develop and implement innovative actions that further sustainable development at the local level.

Collaboration competency: I learn from others (including peers, and others inside and outside of my institution).
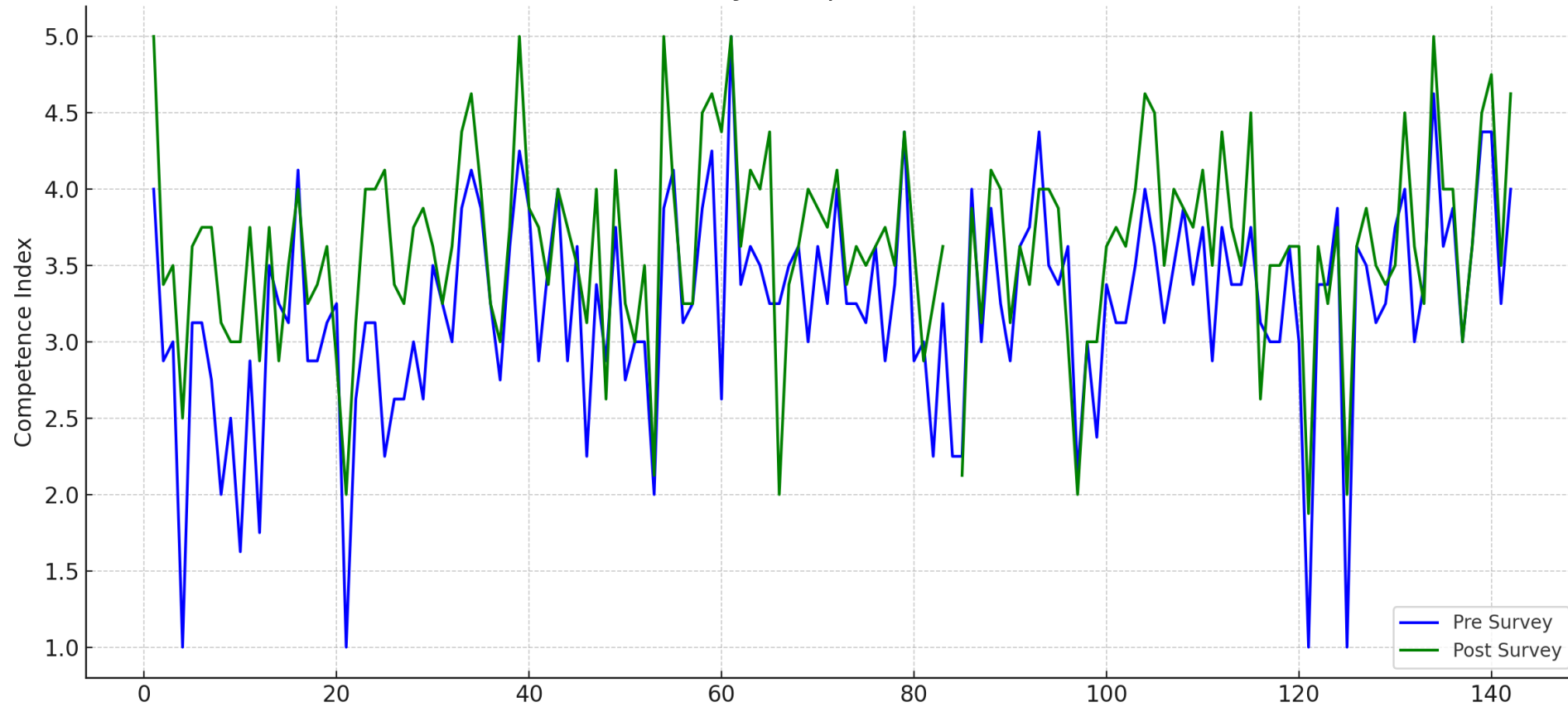
Integrated problem-solving competency: I apply different problem-solving frameworks to complex sustainable developme…

Self-awareness competency: I reflect on my own values, perceptions and actions; I reflect on my own role in the local…

Normative competency: I understand and reflect on the norms and values that underlie one's actions; I negotiate sustainable…

100%   0%

Post-Survey: Increased Sustainability Competence

● Novice ● Basic awareness ● Moderate competence ● Advanced competence ● Fully competent

Systems thinking competency: I recognise and understand relationships, can analyse complex systems, can consider how...

Anticipatory competency: I understand and evaluate multiple outcomes, I can create my own vision for the future, I can apply...

Critical thinking competency: I question norms, practices and opinions; I reflect on my values, perceptions and actions; I take a...

Strategic competency: I develop and implement innovative actions that further sustainable development at the local level.

Collaboration competency: I learn from others (including peers, and others inside and outside of my institution).

Integrated problem-solving competency: I apply different problem-solving frameworks to complex sustainable developme...

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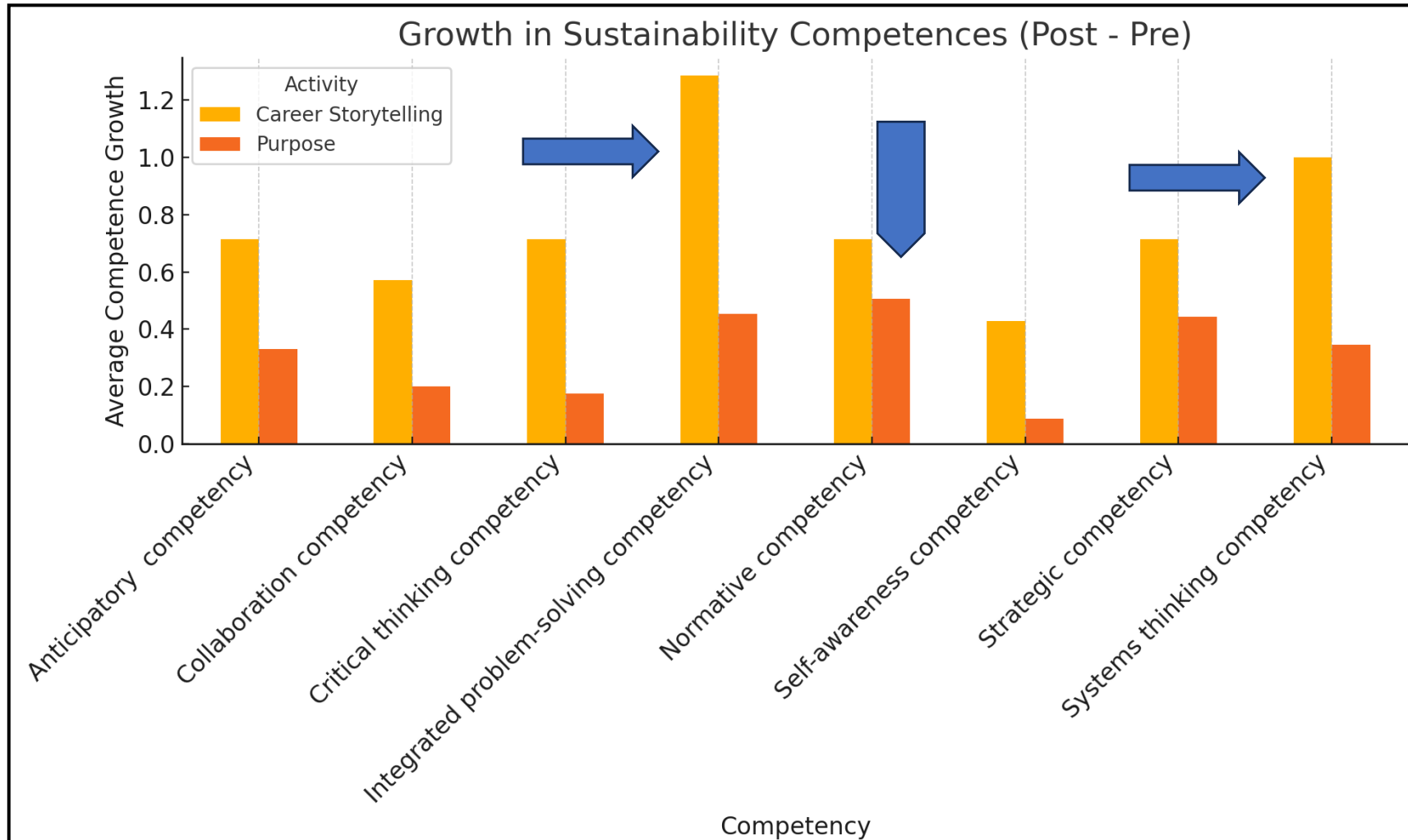
Normative competency: I understand and reflect on the norms and values that underlie one's actions; I negotiate sustainable...
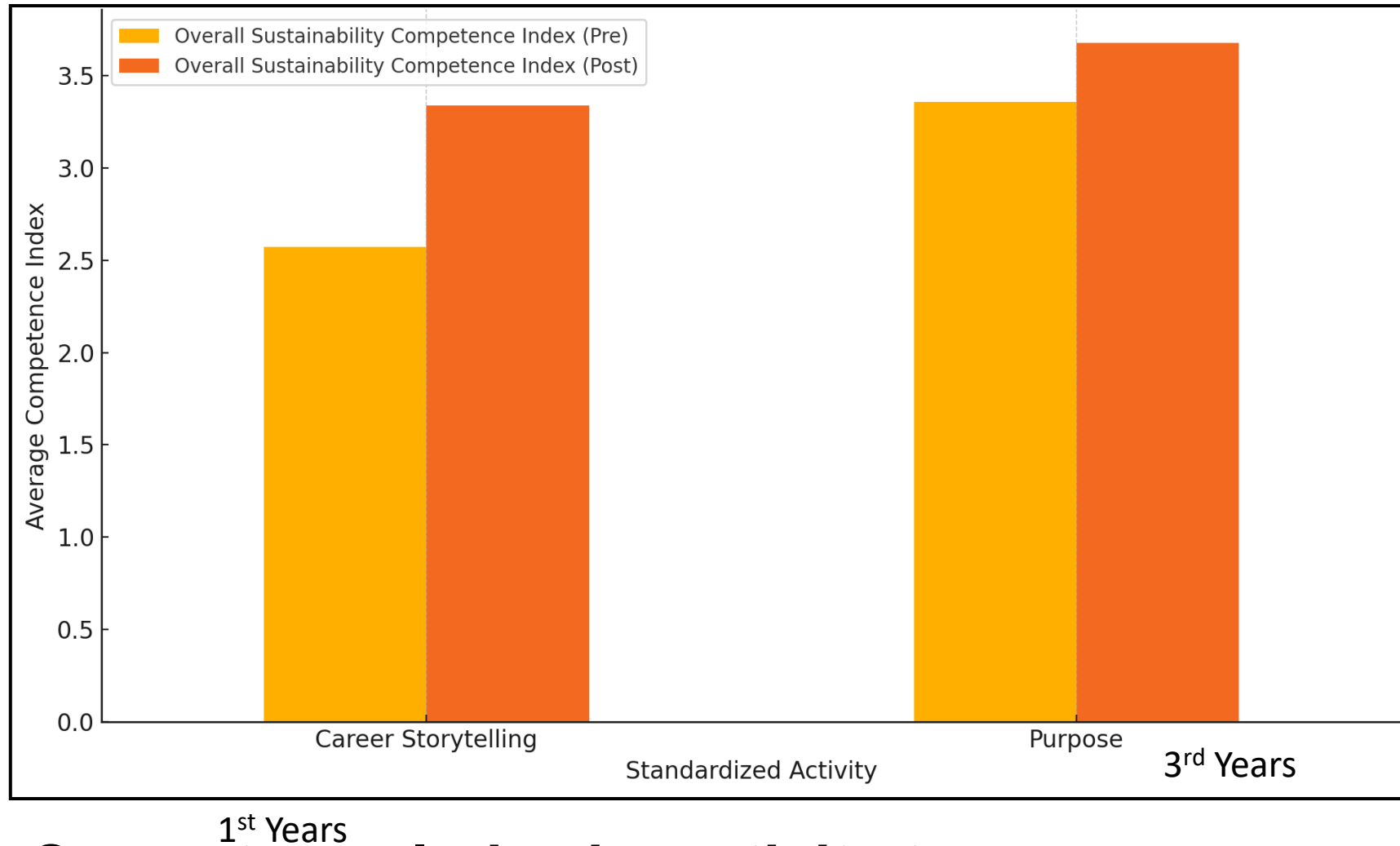
100%   0%   100% .uk

Overall Sustainability Competence Index (Pre vs Post)

144 students

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Growth in Sustainability Competences

Competence Index by activity type

Cripps, K., & Bobeva, M. (2025). Career and employability learning through storytelling for the sustainable development goals. *The International Journal of Management Education*, *23*(3), 101211.

Conclusion and Reflections

- The use of sustainability mindset tools improved students' competencies.

- Qualitative feedback highlights greater alignment between values and professional aspirations.

- Students are better equipped to make responsible, impactful decisions for a sustainable future.

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Realist Approaches to Evaluating Sustainable Enterprise Education

Dr Catherine Brentnall

Department of Strategy, Enterprise and Sustainability

What is evaluation?

Backdrop - 'What Works' Approach to Evaluation

"What Works"

- "Decision making…informed by the best available evidence"

- 15 What Works Centres inc. ageing, homelessness, policing, well-being, local growth, education…

- Hierarchies of evidence approach

- 500 trials in total - 200 in education, 80% show *no effect* (Coldwell and Moore, 2024)

BUILDING EVIDENCE INTO EDUCATION

BEN GOLDACRE

MARCH 2013

Bad Science
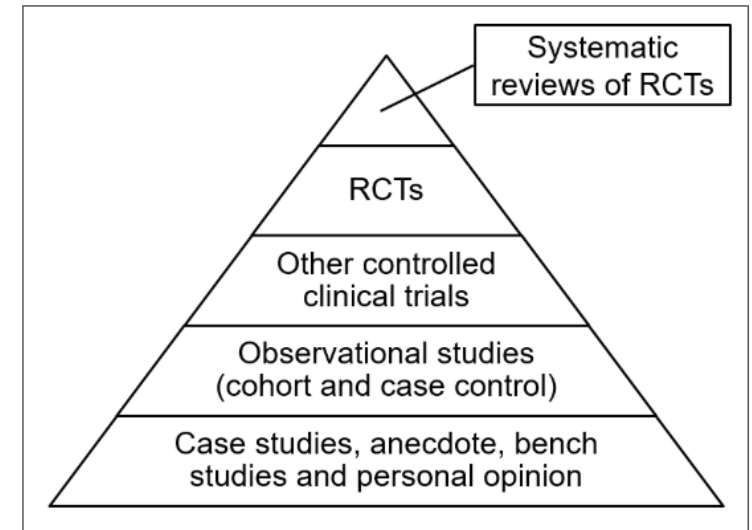
Figure adapted from Greenhalgh T. How to Read a Paper: The Basics of Evidence-Based Medicine. Hoboken: John Wiley & Sons, Incorporated; 2010. Figure 2.1 A simple hierarchy of evidence for assessing the quality of trial design in therapy studies.
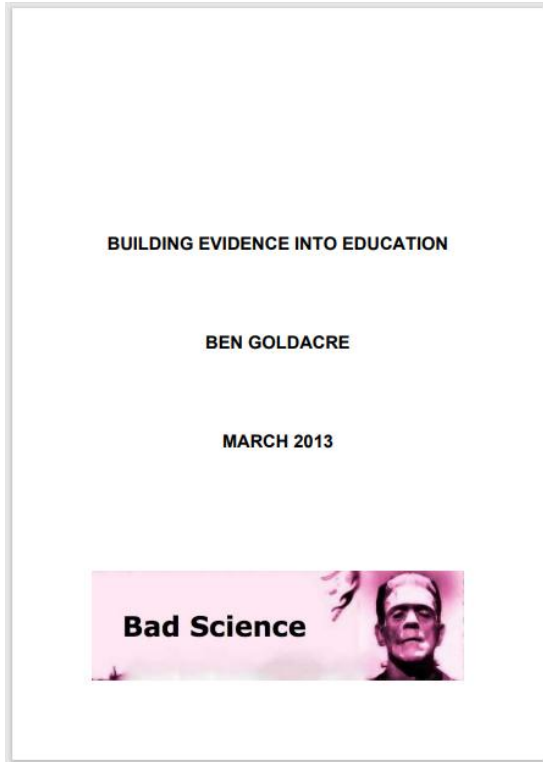
What is evaluation?

Evaluation is **a systematic determination and assessment of a subject's merit, worth, value or significance**, using criteria governed by a set of standards (American Evaluation Society, 2014).

Evaluation is also: a contested term, **methodologically eclectic**, pluralistic and mixed (Wanzer, 2021).

Philosophical Assumptions	Positivism	Realism
Ontology (nature of reality)	There's an objective reality, governed by natural laws...	Natural and social systems (and humans) exert their own powers
Epistemology (nature of knowledge)	'Facts' can be identified through cycles of observation of theory	Observations are filtered through the human brain (no final 'truth')
Role of evaluator and evaluation	Identify and **report observable facts**, ascertaining what works...	Work towards **better understanding**, ascertaining what works for whom, in what circumstances and why...

See: RAMESES_II_Philosophies_and_evaluation_design.pdf

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- Focuses on "what works, for whom, under what circumstances and why"

- Well established in health research and evaluation…

- Attracted Magenta Book supplementary guidance…

RAMESES II reporting standards for realist evaluations

Geoff Wong [1,✉], Gill Westhorp [2], Ana Manzano [3], Joanne Greenhalgh [3], Justin Jagosh [4], Trish Greenhalgh [1]

▸ Author information   ▸ Article notes   ▸ Copyright and License information

Abstract

Background

Realist evaluation is increasingly used in health services and other fields of research and evaluation. No previous standards exist for reporting realist evaluations. This standard was developed as part of the RAMESES II project. The project's aim is to produce initial reporting standards for realist evaluations.

Frequently Asked Questions about Realist Evaluation

The RAMESES II Project

HM Treasury

Magenta Book 2020

Supplementary Guide:
Realist Evaluation

March 2020

Realist Evaluation – In a nutshell…

Realist Philosophy: Understanding Ontological Depth

That which is clearly evident and relatively easy to make an assessment about:

That which is less evident and relatively difficult to measure and make an assessment about:

That which is latent (existing in a dormant form; not yet manifest):

Justin Jagosh

Evidence-based Policy
A Realist Perspective
Ray Pawson

DOING REALIST RESEARCH
Edited by
Nick Emmel, Joanne Greenhalgh, Ana Manzano
Mark Monaghan and Sonia Dalkin

Ray Pawson
HOW TO THINK LIKE A REALIST
A METHODOLOGY FOR SOCIAL SCIENCE
EE Elgar

Ray Pawson

Resources and training for Realist Evaluation:
The RAMESES Project FAQs
A fantastic JiscMail community: The RAMESES Project list

- Strong [Realist - **Depth/Layered**] philosophical underpinning
- Implicit/explicit critique of 'What Works' and move towards: *what works for whom and why?*
- Standards/creative adaptations
- Realist Interview and Retroduction
- Can address weaknesses in EE/SEE evaluation

Where I've used it:

- Brentnall, C (2025). "Extracurricular **one day competitions** in enterprise and entrepreneurship education–theorising effects." *Entrepreneurship Education and Pedagogy* 8.1 (2025): 174-205. https://doi.org/10.1177/251512742412630

- Brentnall C., Lever, J., Downing, G. (2024). **Cooperative Business Impacts** – A Realist Perspective. Available at: What's the evidence for cooperatives? - Co-operative Councils Innovation Network

- Brentnall, C. (2022). Theorising **Competitive Enterprise Education** (2022). PhD Thesis, available at: https://shura.shu.ac.uk/32081/

- Brentnall, C. (2021). **Competitive enterprise education**: developing a concept. *Entrepreneurship Education and Pedagogy*, *4*(3), 346-375. Available at: https://doi.org/10.1177/2515127419900486

- Brentnall, C., Rodríguez, I. D., & Culkin, N. (2018). The contribution of realist evaluation to critical analysis of the effectiveness of **entrepreneurship education competitions.** *Industry and Higher Education*, *32*(6), 405-417. Available at: https://doi.org/10.1177/0950422218807499

- Brentnall, C., Rodríguez, I. D., & Culkin, N. (2018). **Enterprise education competitions**: a theoretically flawed intervention?. In *Creating Entrepreneurial Space: Talking Through Multi-Voices, Reflections on Emerging Debates* (pp. 25-48). Emerald Publishing Limited. Available at: https://doi.org/10.1108/S2040-72462018000009A002

- Clegg, P., and Brentnall, C. (2018). Collaborate?! Why would I want to do that? Lessons from a **HEFCE Catalyst Project on Business Start-Up Collaboration**. IEEC, Oxford Brookes University.

- *Programme theory* is the theory (or set of ideas), about what a programme or intervention is *expected to do…*

- Often, the theories which underpin the use and propagation of interventions are not described and interventions are handed down to practitioners with the theory *implicit* in the organisation of the programme.

- A key task of the realist is to make this theory *explicit* (Pawson, 2006).

Programme theories (sets of ideas) *where they finished*….

Factors with potential to + – influence outcome patterns

More negative outcome patterns — Poorly resourced? ... Well resourced? — More positive outcome patterns

Loser (with no constructive feedback)? ... Graceful winner?

Infra-structural system and political support, resources, public/community support.

Individual capacities motivations, resources and reasoning.

Interpersonal relationships supporting the intervention (between participants, between staff and between each other).

Institutional setting and its culture, character and ethos of the place.

More negative outcome patterns — Conscripted? ... Volunteered? — More positive outcome patterns

Competitively disinclined? ... Competitively inclined?

Competitive Enterprise Education – a Realistic Conceptualisation (Brentnall, 2020; 2022)

Programme Theory – Competing teams of students work together to start and run an enterprise over time and present their work for feedback, developing their confidence and skills through this experiential process.

Implementation

Context: Programmes are inserted into contexts of abundance and contexts of scarcity.

Resources
Informing through consciousness raising and role modelling.
Incentivising through prizes or opportunities, relationship building, support and personal development.

Response
• Feeling excited
• Feeling resilient
• Feeling able to compete
• Feeling not good enough
• Feeling less capable
• Feeling less able to compete

More positive effects: Abundance of personal and social resources influences who volunteers, stays the distance and bounces back from failure; more advantaged students achieve and return.

More negative effects: Scarcity of personal and social resources influences who gets cut or drops out and who experiences negative social comparison; less advantaged students and schools self select out.

Ripple Effects

Contexts of abundance and contexts of scarcity

Existing experiences, attitudes and skills of individuals, existing friendships, previous school success, home and family background, extra curricular and life preparation (or lack there of)…

Who volunteers, who gets cut, who is supported, who experiences early success, who stays the distance, who achieves, who returns….

Meritocratic explanations of success for abundantly resourced students…

…inequalities are reproduced and legitimised…

…failure is credited to the individual rather than the context.

Into which Long Form Competitive Enterprise Education programmes are inserted

1) Under theorised advantage…

2) Resulting under theorised exclusionary potential…

3) Resulting under theorised social effects…

Complex, non-linear, exploring contextual influences, positive, negative and ripple effects…

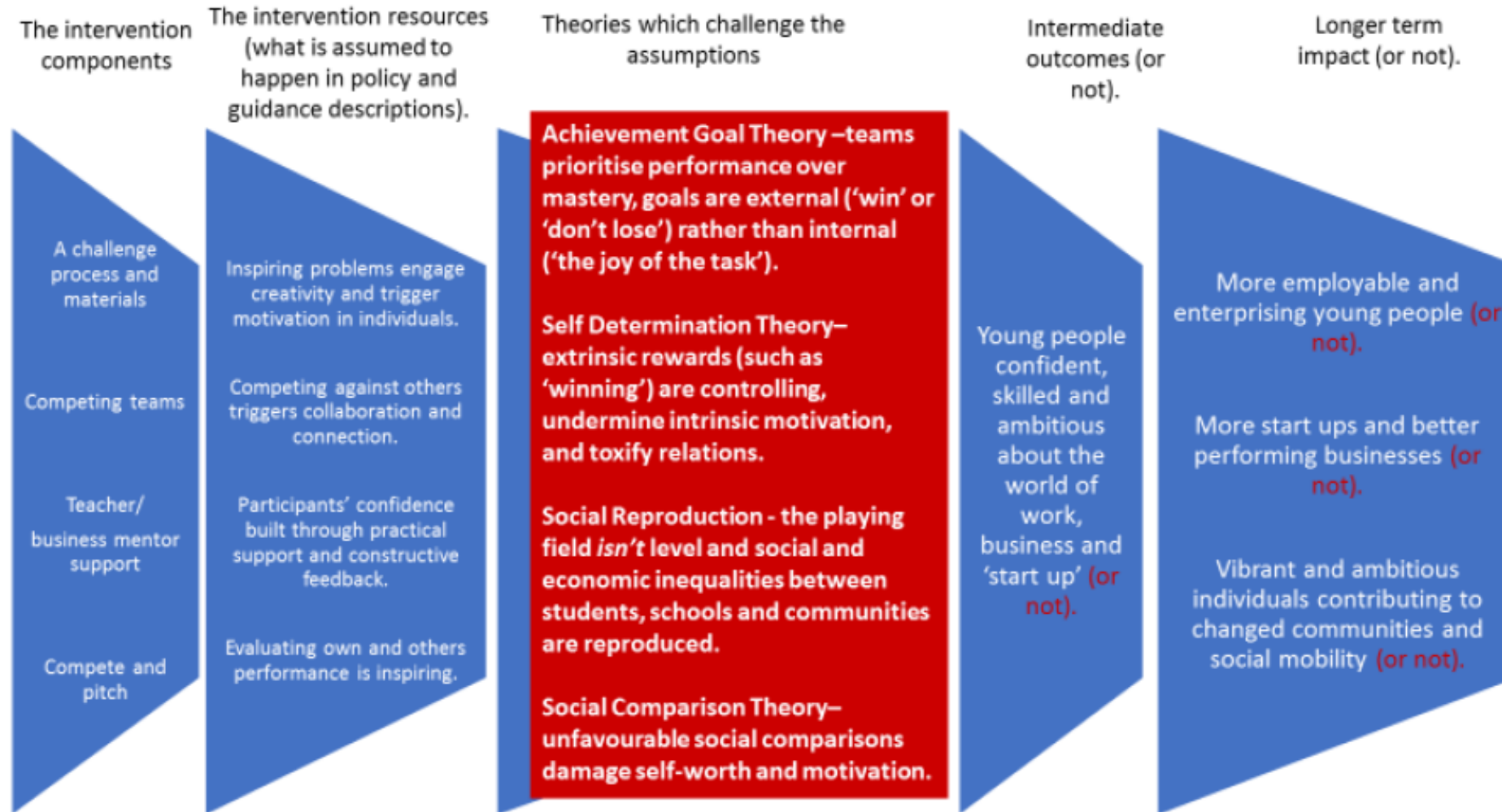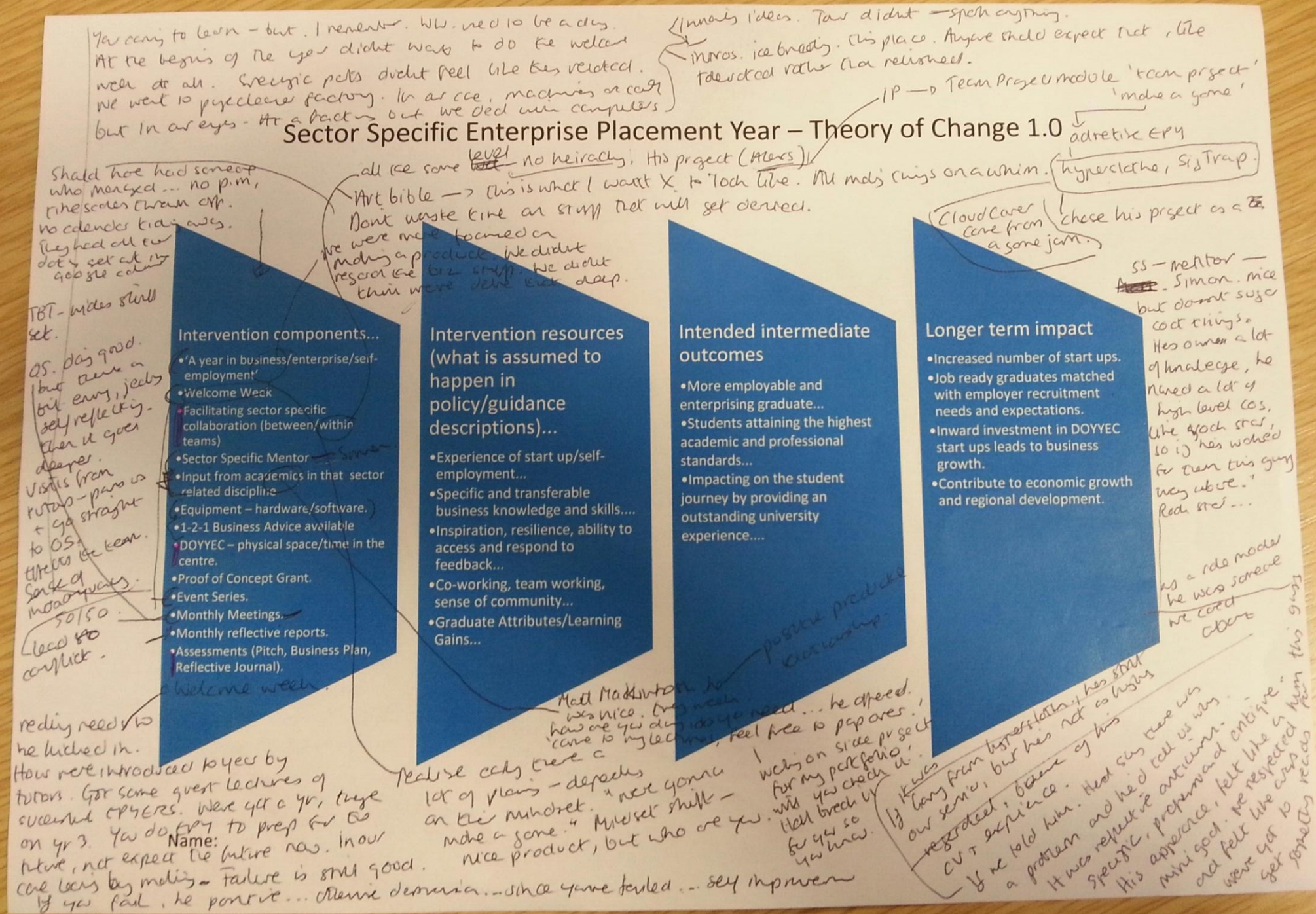# Programme theories (sets of ideas) *where they started….*

The intervention components	The intervention resources (what is assumed to happen in policy and guidance descriptions).	Theories which challenge the assumptions	Intermediate outcomes (or not).	Longer term impact (or not).
A challenge process and materials	Inspiring problems engage creativity and trigger motivation in individuals.	**Achievement Goal Theory** –teams prioritise performance over mastery, goals are external ('win' or 'don't lose') rather than internal ('the joy of the task').	Young people confident, skilled and ambitious about the world of work, business and 'start up' (or not).	More employable and enterprising young people (or not).
Competing teams	Competing against others triggers collaboration and connection.	**Self Determination Theory**– extrinsic rewards (such as 'winning') are controlling, undermine intrinsic motivation, and toxify relations.		More start ups and better performing businesses (or not).
Teacher/ business mentor support	Participants' confidence built through practical support and constructive feedback.	**Social Reproduction** - the playing field *isn't* level and social and economic inequalities between students, schools and communities are reproduced.		Vibrant and ambitious individuals contributing to changed communities and social mobility (or not).
Compete and pitch	Evaluating own and others performance is inspiring.	**Social Comparison Theory**– unfavourable social comparisons damage self-worth and motivation.		

Figure 2 - Testing the programme theory for competitions in entrepreneurship education

Brentnall, C., Rodríguez, I. D., & Culkin, N. (2018). Enterprise education competitions: a theoretically flawed intervention?. In *Creating entrepreneurial space: Talking through multi-voices, reflections on emerging debates* (Vol. 9, pp. 25-48).
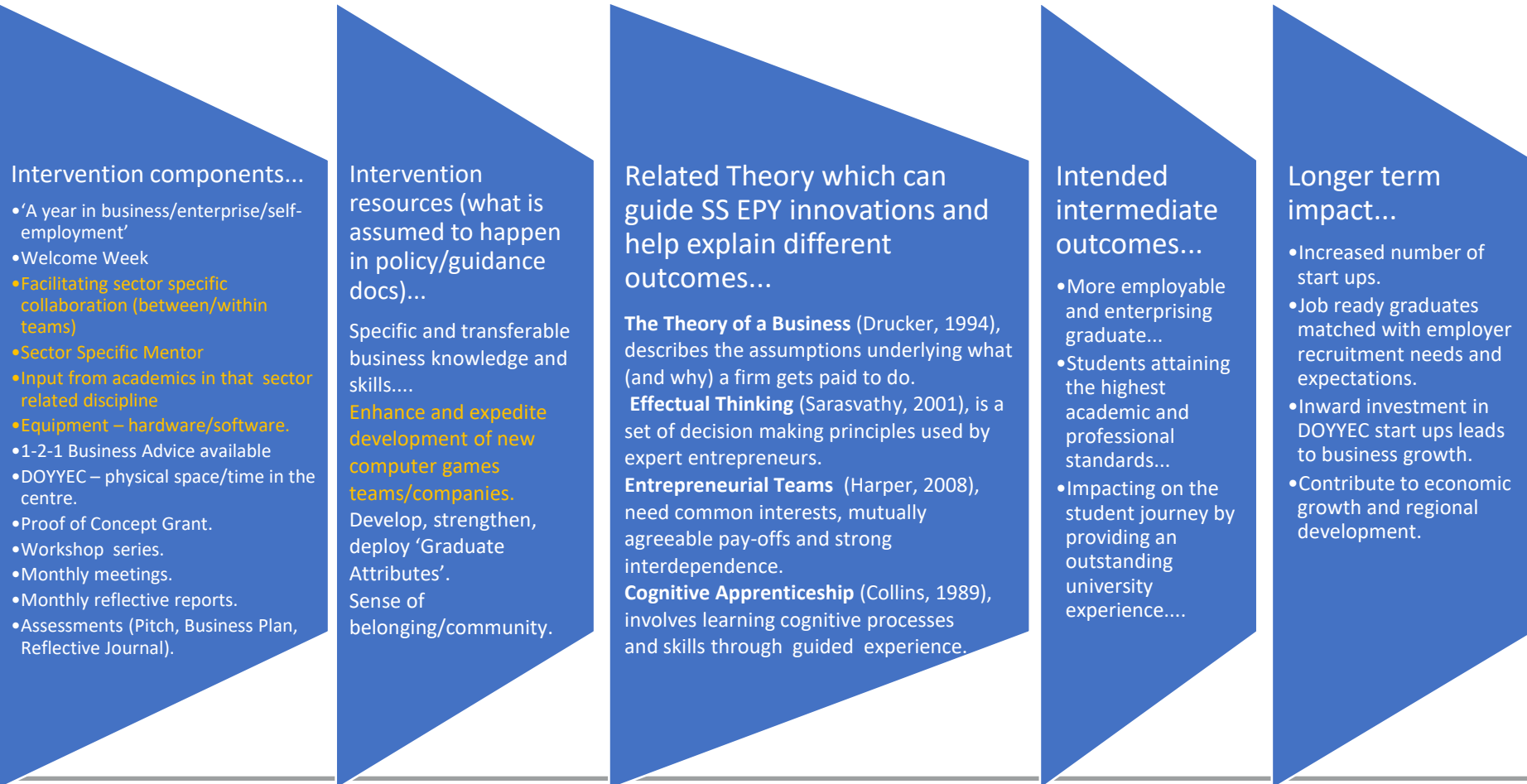
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HEFCE Catalyst Project

- Enterprise Placement Year aiming to facilitate cross sector collaboration

- Programme theory

- 6 interviews – Shared the

Generic (and Sector Specific) Enterprise Placement Year – Programme Theory 4.0

Intervention components…

- 'A year in business/enterprise/self-employment'
- Welcome Week
- Facilitating sector specific collaboration (between/within teams)
- Sector Specific Mentor
- Input from academics in that sector related discipline
- Equipment – hardware/software.
- 1-2-1 Business Advice available
- DOYYEC – physical space/time in the centre.
- Proof of Concept Grant.
- Workshop series.
- Monthly meetings.
- Monthly reflective reports.
- Assessments (Pitch, Business Plan, Reflective Journal).

Intervention resources (what is assumed to happen in policy/guidance docs)…

Specific and transferable business knowledge and skills….

Enhance and expedite development of new computer games teams/companies.

Develop, strengthen, deploy 'Graduate Attributes'.

Sense of belonging/community.

Related Theory which can guide SS EPY innovations and help explain different outcomes…

The Theory of a Business (Drucker, 1994), describes the assumptions underlying what (and why) a firm gets paid to do.

Effectual Thinking (Sarasvathy, 2001), is a set of decision making principles used by expert entrepreneurs.

Entrepreneurial Teams (Harper, 2008), need common interests, mutually agreeable pay-offs and strong interdependence.

Cognitive Apprenticeship (Collins, 1989), involves learning cognitive processes and skills through guided experience.

Intended intermediate outcomes…

- More employable and enterprising graduate…
- Students attaining the highest academic and professional standards…
- Impacting on the student journey by providing an outstanding university experience….

Longer term impact…

- Increased number of start ups.
- Job ready graduates matched with employer recruitment needs and expectations.
- Inward investment in DOYYEC start ups leads to business growth.
- Contribute to economic growth and regional development.

An example from Sustainable Enterprise/Business Education

Intervention components...

- ESD Curriculum (Modules & Workshops & Asynchronous activities, SDGs, UNESCO competencies)
- Holistic design across modules – carefully sequential layering of knowledge, skills and capability
- Strategic involvement of senior sponsors for all participants
- Work-based assignments briefs
- SMI diagnostic (pre-programme)
- SMP integrated across programme as a personal growth feature
- Guest speakers and tutors with sustainability expertise

Resources the comp... create (or not).

Deep, holistic and interconnected understanding of integrating sustainability across business and sectors

Work-based learning allowed live, experiential authentic learning in semi-consultancy role making direct changes in participants organisation

A deeper critique and evaluation of current mindset, purpose, values versus sustainable values (self, society & business)

Connection to emerging Industry practice & practitioners leading to new internal & external narratives

Intended intermediate outcomes...

- Upskilling talent from within to become sustainability leaders
- Increased number of responsible practitioners
- How and why of embedding sustainability (strategy-ops, marketing, finances, workforce)
- Sustainable change and innovation within the business
- Shift in values , purpose & longterm thinking both individually and organisationally

Longer term impact...

- Significant acceleration towards responsible business practice
- Low-Carbon emission industry
- More sustainable/social enterprise
- Transformation of profit-only ethos environmental/social paradigm
- Harmonious and regenerative relationship with the Earth
- Shift towards sustainable global economy
- Purpose of HEI evolves from utilitar economic to progressing humanity, society in consideration of future generations
- Transformation in human consciousness towards higher value

Share the theory (with participants, practitioners, stakeholders and ask 'what's working (or not) and why?'

Realist introduction - resources -

The "Context + Mechanism" Association: a Key Heuristic in Realist Evaluation (youtube.com)

(936) The Importance of Understanding Context: Realist Methodology for Public Health and Primary Care – YouTube

Retroductive Theorizing in Applied Scientific Realism (youtube.com)

Resources and training for Realist Evaluation:
The RAMESES Project FAQs

A fantastic JiscMail community: The RAMESES Project list

Get in touch - c.brentnall@mmu.ac.uk
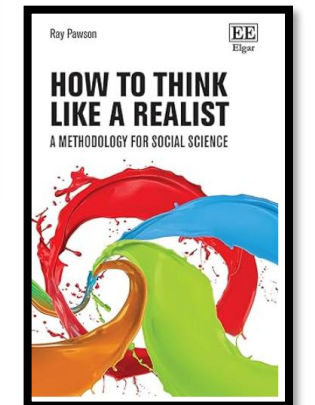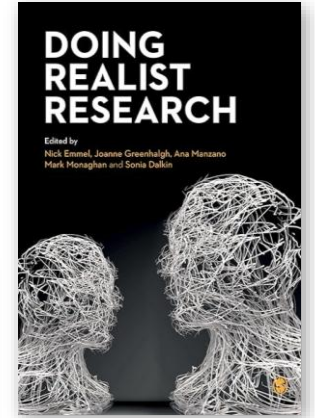
Ray Pawson

Exploring the connections between the Sustainable Development Goals, sustainability competencies and sustainability mindset

Professor Ian Turner

Associate Professor Chris Ribchester

Sustainability Mindset

The five pathways to nature connection

1 Senses
Exploring and experiencing nature through all the senses

2 Beauty
Seeking and appreciating the beauty of the natural world

3 Emotion
Noticing and welcoming the feelings nature inspires

4 Meaning
Celebrating and sharing nature's events and stories

5 Compassion
Helping and caring for nature

Richardson, M., & Butler, C.W. (2022). *The nature connection handbook: A guide for increasing people's connection with nature*. United Kingdom.

Sustainability Mindset

□ Ecoliteracy
□ My Contribution

□ Long-Term Thinking
□ Flow in Cycles
□ Both+And Thinking
□ Interconnections

Ecological Worldview

Systems Perspective

Spiritual Intelligence

Emotional Intelligence

□ Oneness with Nature
□ Mindfulness
□ Purpose

□ Reflection
□ Self-Awareness
□ Creative Innovation

'Clip from The Trials of Life: Finding Food', The Trials of Life, Finding Food, 11:10 13/09/2014, BBC2 England, 50 mins. 00:33:46-00:36:00. https://learningonscreen.ac.uk/ondemand/index.php/clip/144884?bcast=114118376 (Accessed 01 Mar 2019

Draw A Scientist Test

Devised by Chambers in 1983

Chambers was able to show that children began to develop stereotypical views of scientists from a very early age, with a progressively larger number of indicators appearing as the grades progress
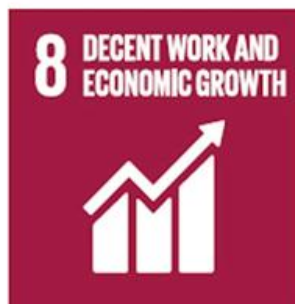
Chambers, D.W. (1983). "Stereotypic Images of the Scientist: The Draw a Scientist Test". *Science Education* **67** (2): 255–265

Sustainability Mindset

Competencies for sustainability literate graduates

Education for Sustainable Development Guidance

AdvanceHE · QAA

March 2021
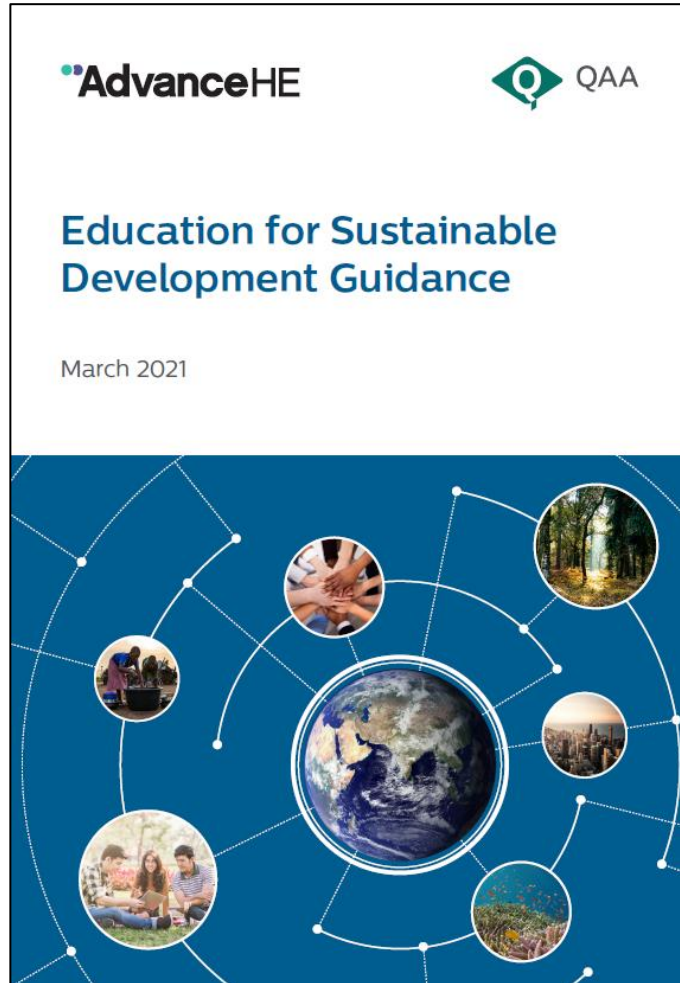
Advance HE/QAA, 2021

- **Ways of practicing** (Integrated problem-solving competency; Collaboration competency; Strategic competency)

- **Ways of thinking** (Critical thinking competency; Anticipatory competency; Systems thinking competency)

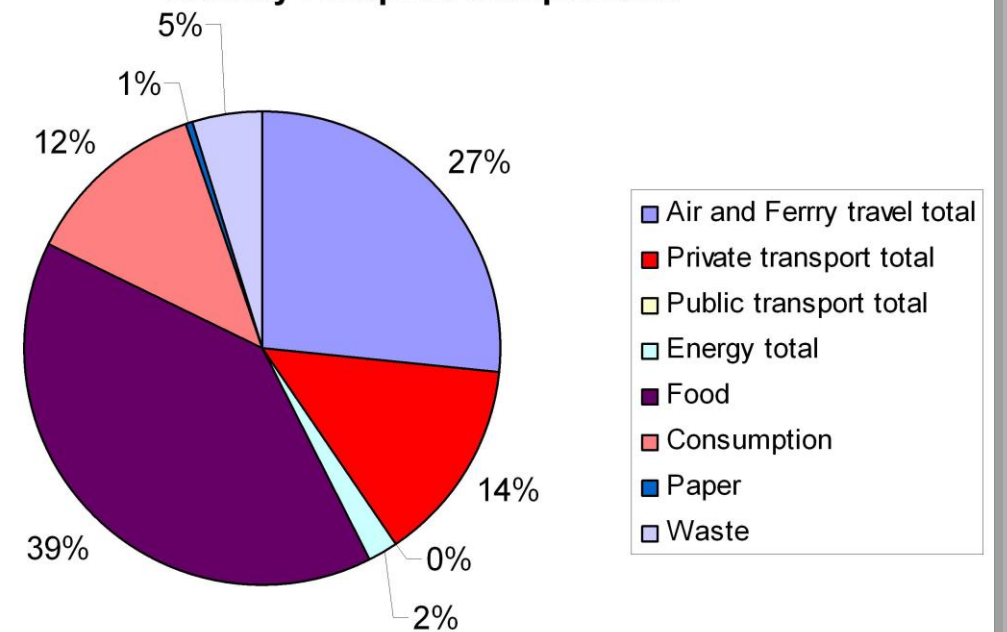- **Ways of being** (Self-awareness competency; Normative competency)

Devon Footprint Components

- Air and Ferrry travel total
- Private transport total
- Public transport total
- Energy total
- Food
- Consumption
- Paper
- Waste

0% 2% 2% 2% 4% 24% 10% 56%
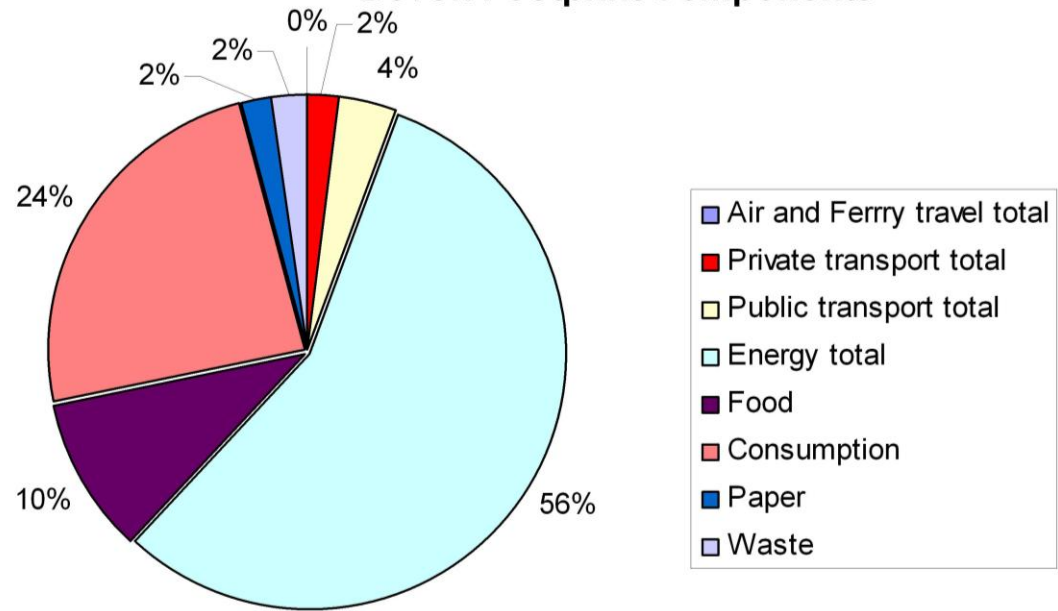
Norway Footprint Components

- Air and Ferrry travel total
- Private transport total
- Public transport total
- Energy total
- Food
- Consumption
- Paper
- Waste

5% 1% 12% 27% 14% 0% 2% 39%

Sustainability Mindset

□ Ecoliteracy
□ My Contribution

□ Oneness with Nature
□ Mindfulness
□ Purpose

Ecological Worldview

Systems Perspective

Spiritual Intelligence

Emotional Intelligence

□ Long-Term Thinking
□ Flow in Cycles
□ Both+And Thinking
□ Interconnections

□ Reflection
□ Self-Awareness
□ Creative Innovation

Thank you

Lunch break
(12.45 to 13.30 pm)

Session 3 - Integrating SMP Tools in Assessment/Programs: Towards Authentic Teaching strategies

13:30 – 13:45 | Opportunities and challenges in embedding SMP tools and principles in assessment design (Orla Kelleher)

13:45 – 14:45 | Design & Share Session: Development of authentic teaching, learning and evaluation strategies to enrich one's own practice

14:45 – 15:00 | Workshop Close & Next Steps

Opportunities and challenges in embedding SMP tools and principles in authentic assessment design

Presenter:
Orla Kelleher
Senior Lecturer in Responsible Management
Programme Leader - MSc Sustainable & Ethical Business Management
PRME Lead & Sustainability Champion
UN PRME Working Group on Sustainability Mindset
Derby Business School, University of Derby

What is the purpose of Higher Education today?

What challenges does that present for ESD, PRME & SMP?

What challenges (and opportunities) does it offer for assessment design?

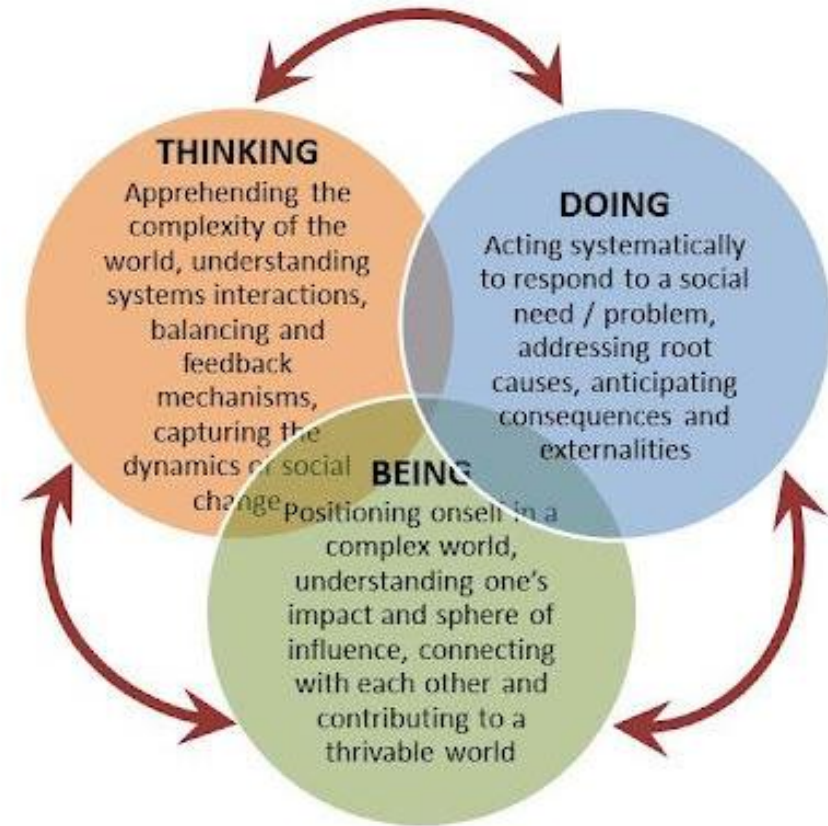| Era	Purpose of Higher Education	Nature & Spirituality	Key Influences
Ancient (Egypt, China)	Serve religion, state and elite governance	Religion, humanity and nature tied to divine cosmic order	Temples, bureaucracy
Classical (Plato, Confucius)	Cultivate virtue and just leadership	Harmony with nature Exploration of divine principles & natural laws	Moral philosophy
Medieval (500-1800)	Theological and civic moral order	Seeking universal truth through faith and reason leading to separation of Church & State in Age of Reason	Clergy, Confucian exams
Industrial (1800-1950s)	Nation-building, scientific training, Science, Professionalism	Rise of secular education to meet industrial workforce needs, Nature seen as resource to exploit	Humboldt, state planners
Post-War (1950s–70s)	Modernization, State tool for industrial & scientific progress	Pluralistic allowing for diversity in secular and religious perspectives	Human capital theory
Neoliberal Globalization (1970-2000s)	Employability, economic growth, Individual Advancement	Focus on sustainability & interdependence with nature with recognition of a need of a shift in consciousness – rise of grand societal challenges	Markets, rankings
21st Century (Now)	Sustainability, ethics, global citizenship??	Attempt to reclaim moral purpose with shift away from profit-only motive & care for Mother Earth & future generations – Shift in VALUES	ESD, PRME, UNESCO, SDGs

FOSTERING AN INFRASTRUCTURE THAT ENABLES TRANSFORMATION

'Head, Hands and Heart dimension of sustainability learning (Sipos et., 2008)

• Knowledge (Thinking),

• Doing (Skills, Practical application)

• Being (Values, Attitudes, Positions)

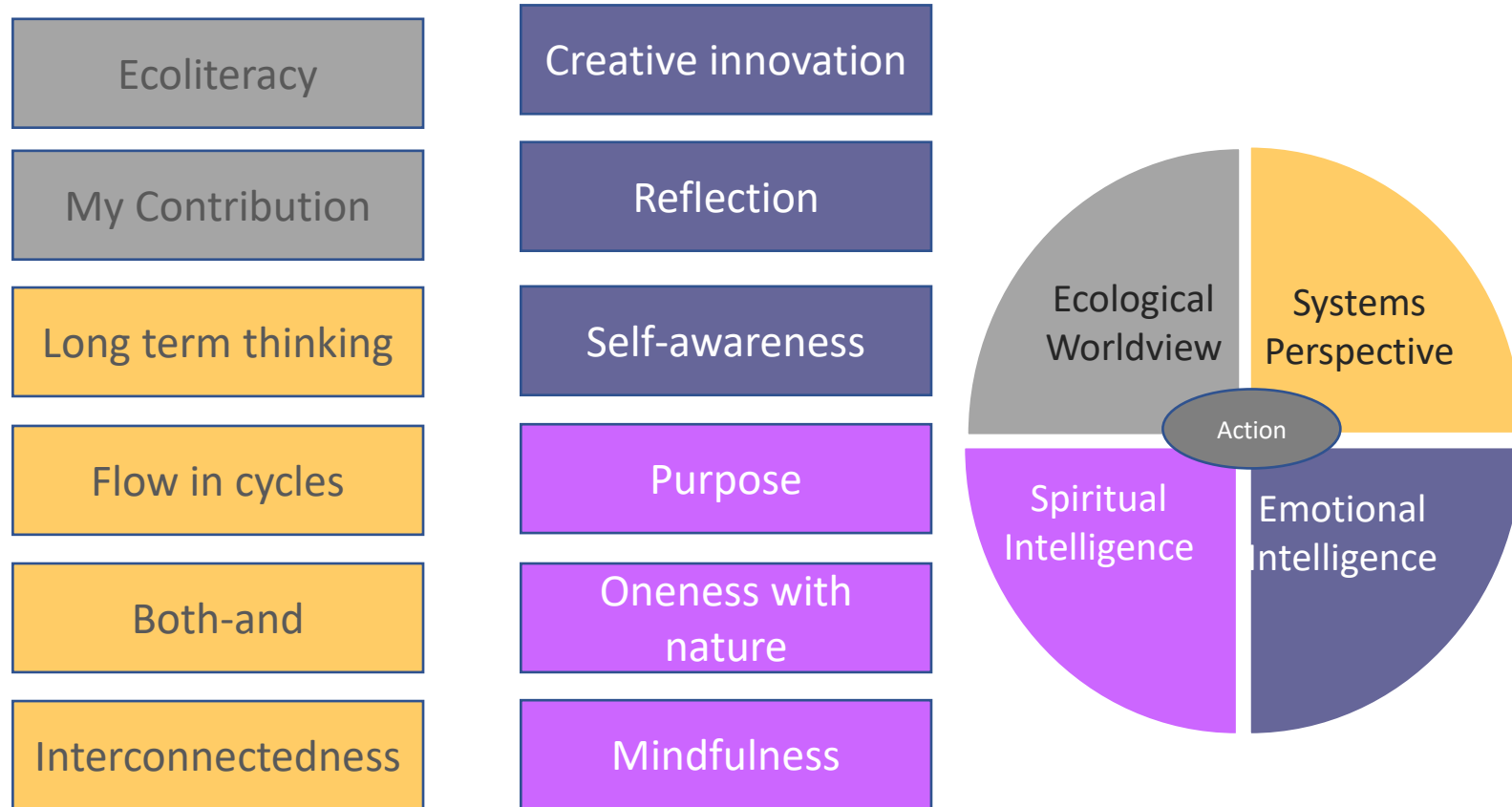(Rimanoczy & Ivanona, 2021; Rimanoczy, 2020;)

THINKING Apprehending the complexity of the world, understanding systems interactions, balancing and feedback mechanisms, capturing the dynamics of social change

DOING Acting systematically to respond to a social need / problem, addressing root causes, anticipating consequences and externalities

BEING Positioning oneself in a complex world, understanding one's impact and sphere of influence, connecting with each other and contributing to a thrivable world

Opportunities & Challenges to embed SMP Tools in Summative Assessment:

MSc Sustainable & Ethical Business Management

The 12 Sustainability Mindset Principles

Ecoliteracy	Creative innovation
My Contribution	Reflection
Long term thinking	Self-awareness
Flow in cycles	Purpose
Both-and	Oneness with nature
Interconnectedness	Mindfulness

Ecological Worldview · Systems Perspective · Action · Spiritual Intelligence · Emotional Intelligence

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Sustainability mindset integration across programme

UNIVERSITY OF DERBY

PG Cert

The Case for Sustainable & Ethical Business

- Reflective Portfolio
- Carbon Literacy Certification & Climate Fresk
- Sustainability Mindset

√

Sustainable & Ethical Business Strategy

- Responsible values and principles in business strategy
- Purpose – beyond profit

Leading Sustainable & Ethical Change

- Responsible Leadership
- Values and consciousness for sustainable development

√

PG Diploma

Sustainable & Ethical Business Operations & Marketing

- Integration of responsible principles in business operations and marketing

Sustainable Workforce And Wellbeing

- Nature connectedness
- Inter-connection between CSR and sustainability

√

Sustainable & Ethical Finance & Accounting

- Responsibility in financial accounting and reporting
- Triple bottom line as new norm

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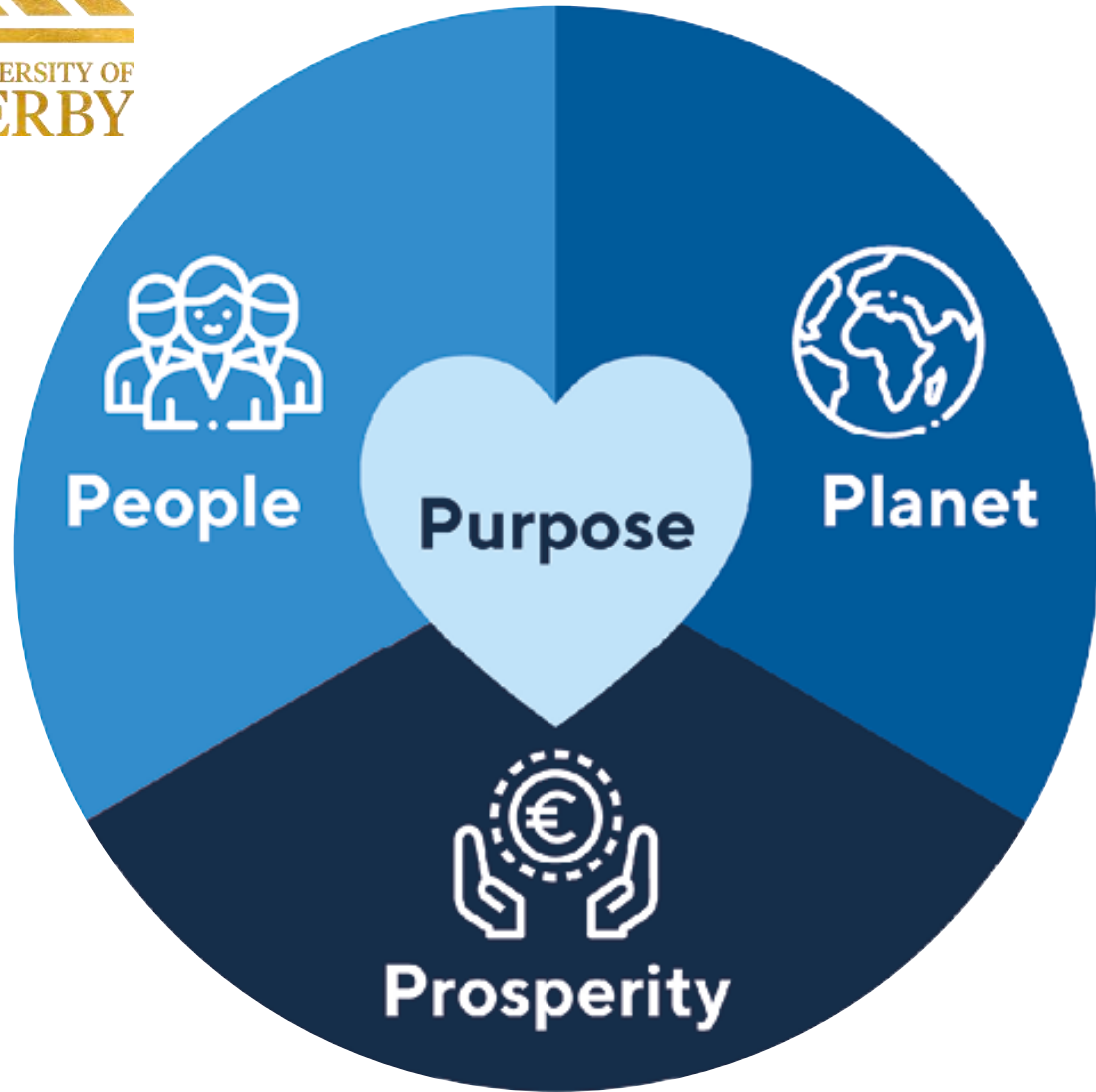
Module Assessment

In each module, students were asked to evaluate why and how to embed responsible values and principles in their organisations or chosen sector

The Case for Sustainable & Ethical Business (20 credits)

UNIVERSITY OF DERBY

CW1: Group(1) Presentation

Analysis of world megatrends including climate change and Net Zero

Cw2: Reflective Portfolio – Carbon Literacy Certification & Reflective Statement

Why be responsible as a business or world citizen?

What's my and others contribution +/-?

On successful completion of the module, you will be able to:

1. Critically analyse the mega trends, global drivers and critical reasons for sustainable, ethical and socially responsible business

2. Critically evaluate sectoral/organisational trends, challenges, barriers and opportunities in sustainable, ethical and responsible business

3. Critically reflect on the role of business and society as enablers in this global transition

4. Critically reflect on your mindset and role as a responsible practitioner and world citizen

Module Assessment

UNIVERSITY OF DERBY

Component 1: Group Presentation
Weighting: 50%
Assesses Learning Outcomes: 1 and 2

CW1 Assignment
In groups of 3-4 persons, prepare a 20minute presentation that argues the case for embedding environmental sustainability, social responsibility and ethics within [tourism and hospitality] business practice today.

Includes Climate Science, Climate Fresk & Net Zero content to support megatrends analysis of world issues

Component 2: Reflective Portfolio
Weighting: 50%
Assesses Learning Outcome 3 and 4

CW2 Assignment
Given the imperative to address the Climate Emergency, this personal reflection invites you to *critically reflect on the role of business and society in reaching Net Zero, and specifically the opportunity to critically reflect on your contribution as an individual* in co-creating a positive, sustainable future. It also enables you to attain Carbon Literacy certification with the Carbon Literacy Project, as part of your reflective portfolio, if your submission is successful.

Reflective Portfolio

Includes **Carbon Literacy Evidence Form** and Individual Reflection & Artifact

Grading Rubric

Assessment criteria - aligned with Sustainability Competencies

Grade	Critical Thinking & Self Awareness competency	Normative competency & Self-awareness	Normative competency & Self-awareness	Academic rigour
	Critical thinking on role of business and society in Net Zero transition	Ability to reflect on the inner and outer moral, ethical and practical challenges to achieve true sustainability.	Critical reflection on the mindset and behavioural shifts needed to co-create a positive, fair and sustainable future	Ability to write academically and present a coherent written personal reflection

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CW1 Learning Strategy: Focus on Thinking/Skills

☐ Ecoliteracy
☐ My Contribution

Climate Fresk
PESTLE & SWOT
Analyses

"What is happening in the world today and its impact, now and in the future"

Carbon Literate
Educator
Bronze

CW2: Reflective Portfolio – **focus on Being/Doing**

This personal reflection portfolio (2000-2,250 words or equivalent) should include the following:

- Complete the **Carbon Literacy Evidence Form** to identify the most important changes business and society need to make to reach Net Zero and identify individual and group actions to reduce Carbon emissions (500-750 words or equivalent)

- Note: The Carbon Literacy Evidence form follows Carbon Literacy Project (CLP) requirements directly so it can be submitted directly to CLP.

Written Personal Reflection <mark>[Adapt to your context]</mark>

- Having completed the Carbon Literacy Evidence Form, critically reflect on the shifts in values, behaviours and lifestyle choices that society and business need to make to achieve a sustainable global economy, drawing from your personal and professional experience (400 words or equivalent).

- Critically reflect on the **moral and ethical challenges of responsible practice** today taking into consideration what is required to achieve true sustainability (400 words or equivalent).

- As a responsible practitioner and world citizen, critically on the **mindset shifts (e.g. values, qualities, behaviours or practices)** that you wish to cultivate in your own personal and professional life to help co-create a positive, fair and sustainable future (500 words or equivalent).

Written Personal Reflection <mark>[Adapt to your context]</mark>

"Create an artefact that encapsulates this mindset shift and the deeper 'felt' experience of this learning. This could be a story, picture, metaphor, video blog, poem, structure, personal vision or position statement. Include a narrative (200 words or equivalent) here that conveys what this artefact means to you ".

- *[Introducing the use of Art, Imagination & Creativity to allow students to declare their own values and personal position when it comes to Mother Earth, Future Generations, etc]*

Examples of student assessment work

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Tribute to Mother Earth 'Student Artifact'

She is wise and kind

She keeps things balanced, calm and fair

Her forests cleans the air we breath

Her rivers and oceans quench our thirst and soothes our aching frames

Providing all our basic needs for survival

She nurtures all, far & wide.

How can I respond to her endless gifts?

Being Considerate:
Living in sync with her

Collaborating with other inhabitants in fairness & with integrity

Gratitude & Respect

Balance

Stewardship

"Oneness with Nature" SMP

Could Nature Connectedness be the best strategy for Pusterla?

Crown = Staff

✓ Reflects sustainability values at the core

✓ 'Easy' structure to communicate

✓ Trees are our raw materials = tangible element

✓ Boost environmental & social impact opportunities

Trunk = Structures

? Is it too broad for application?

? Will staff buy in and engage?

? How can we reimagine 'What beauty is'?

? Quantitative v Qualitative measures

Roots = Culture

Soil = Community

Richardson et al, 2020, Richardson et al, 2021, Lumber, 2016, McEwan et al, 2019, Jorgensen et al, 2020, Rakow & Eells, 2019)

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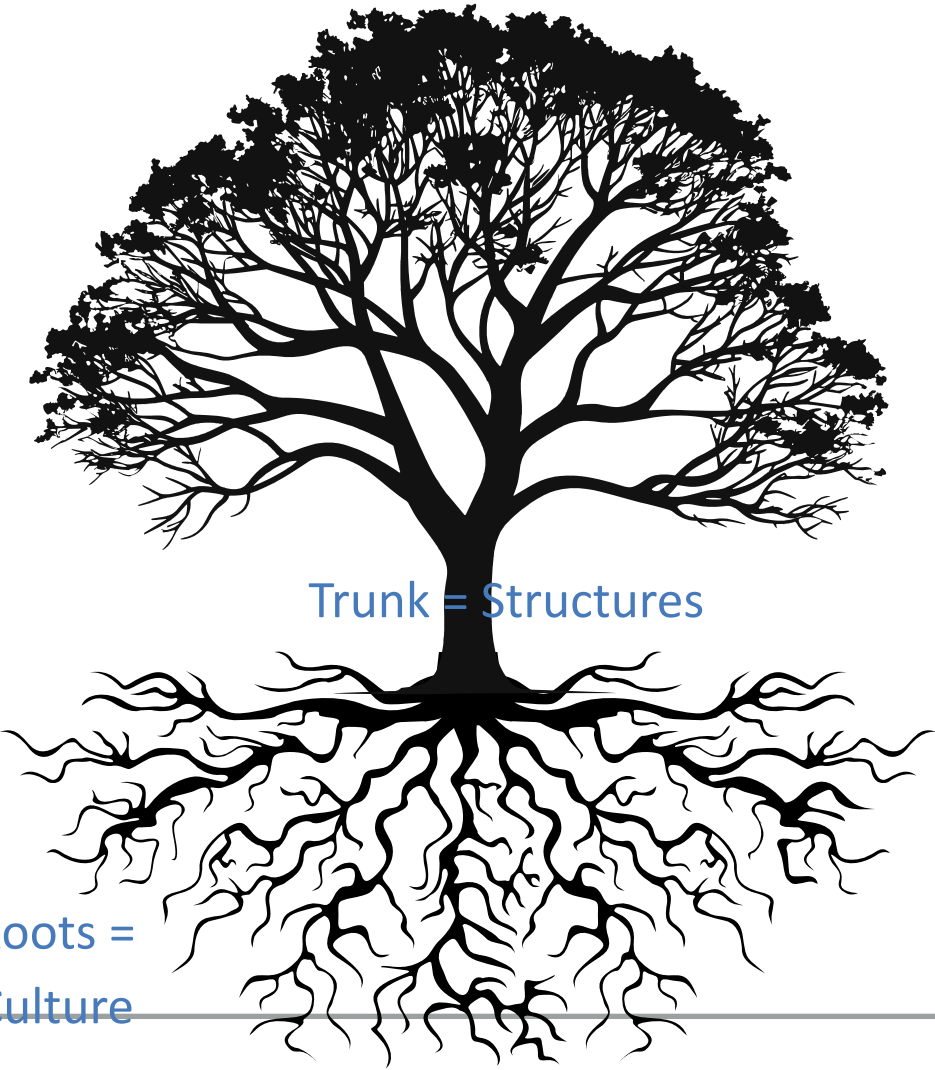
CW2 Learning Strategy: Focus on BEING -
Use of reflection, critical evaluation of personal and societal values and use
of art, imagination and creativity

Examples of learning activities that supported the assessments

❑Long-Term Thinking
❑Flow in Cycles
❑Both+And Thinking
❑Interconnections

Contemplation of inter-connectedness, current situation and consideration of future generations

❑Reflection
❑Self-Awareness
❑Creative Innovation

Reflective / Reflexive practice
Self Discovery of Values
Personal Position-taking
Envisioning activities

❑Oneness with Nature
❑Mindfulness
❑Purpose

Re-evaluation of purpose
Using 'art and imagery' to surface feelings and values

What shift in mindset and human values will lead to a truly sustainable future and a better world?

What are the barriers to embedding sustainability / responsible practice

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Levels of Personal Consciousness

Service — 7

Making a Difference — 6

Internal Cohesion — 5

Transformation — 4

Self-esteem — 3

Relationship — 2

Survival — 1

Positive Focus / Excessive Focus

Service to Humanity and the Planet
Devoting your life in self-less service
to your purpose and vision

Collaborating with Partners
Working with others to make a positive difference
by actively implementing your purpose and vision

Finding Personal Meaning
Uncovering your sense of purpose and creating
a vision for the future you want to create

Personal Growth
Understanding your deepest motivations, experiencing responsible
freedom by letting go of your fears

Self-worth
Feeling a positive sense of pride in self
and ability to manage your life. **Power, status**

Belonging
Feeling a personal sense of belonging, feeling loved by self and
others. **Being liked, blame**

Financial Security & Safety
Creating a safe secure environment for self
and significant others. **Control, greed**

Barrett **Values Centre**

Schwartz defines values as desirable, trans-situational goals that serve as *guiding principles* in people's lives (Schwartz, 1992).

"Given free choice, healthy people tend to values truth, goodness and beauty... with a focus on *growth values*" (Fuer cited in Morgan 2012, p143)

Values are the answer to the question: *"In a world where you could choose to have your life be about something, what would you choose?"* (Wilson & Murrell, 2004, p.135).

Every human has an *essential inner nature* or *'inner core'* of natural inclinations, propensities, sentiments and potentialities that are innate and also influenced by early childhood and life experience. These potentialities can be *actualized or not*. This inner nature has some characteristics that are species-wide and also unique to the individual (Morgan, 2012, p.156).

What are values?

What are higher level values?

"..every day human acts are impressed by the *distinctly human spiritual core* that, though not perfect, is perfectible by acquired and infused *virtue*......" (Acevedo, 2018, p.758)

"The distinction between authentic values and inauthentic values is one between values which are expressive of the primal drives of the organism and those which are anxiety-induced" (Fuer cited in Morgan, 2012, p.146)

"Core values are the words that describe who you are and what you stand for" Barrett, 2020
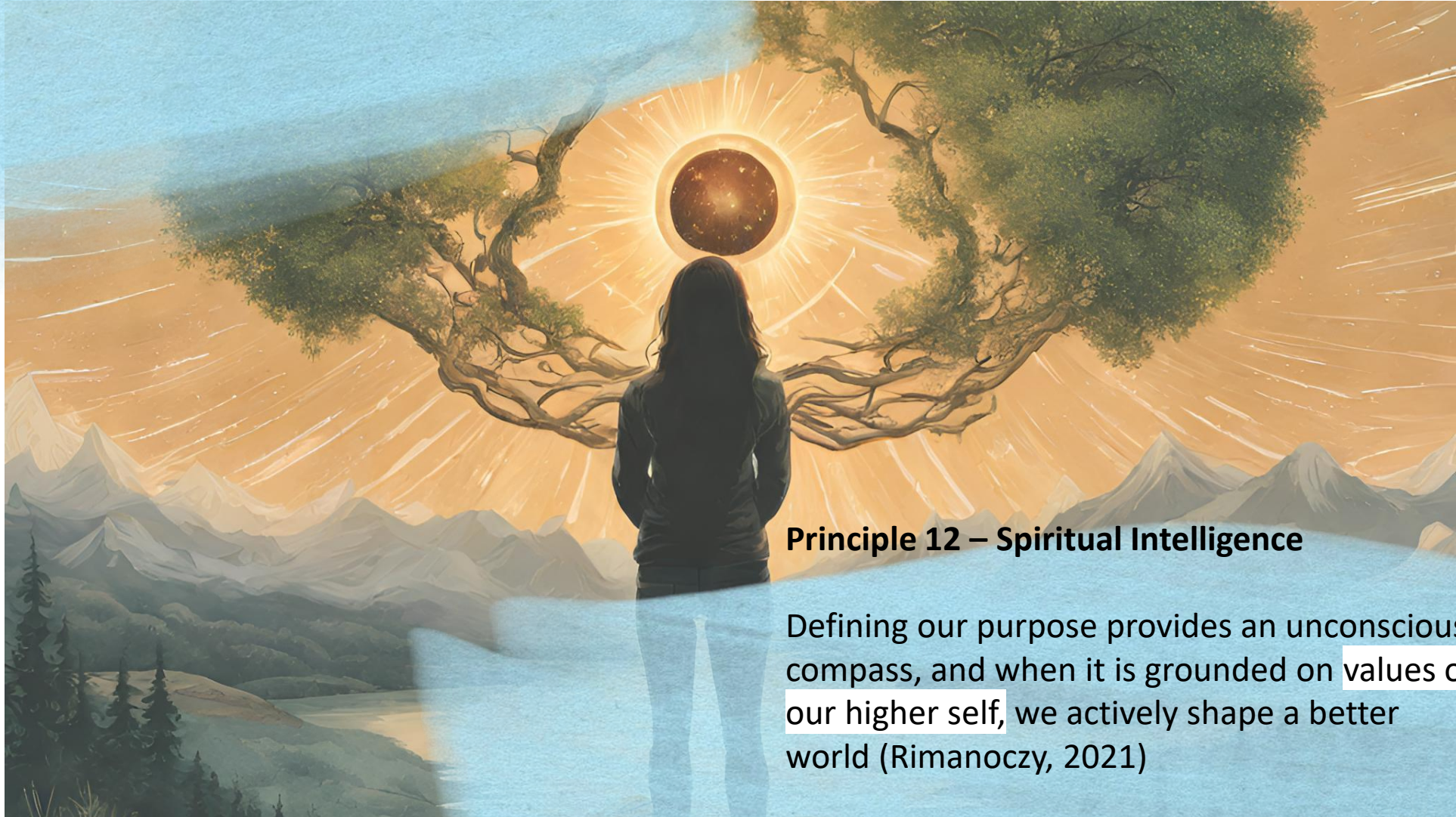
Principle 12 – Spiritual Intelligence

Defining our purpose provides an unconscious compass, and when it is grounded on values of our higher self, we actively shape a better world (Rimanoczy, 2021)

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What is Spiritual Intelligence?

Consciousness

Meaning

Unique Purpose & Contribution

Conscious Values

Illumination

Greater Awareness

Wisdom, Compassion, Forgiveness..

Presence

Connection

Urge to develop

Conscience

Evolution

Mindfulness

Intuition

Embodied Learning
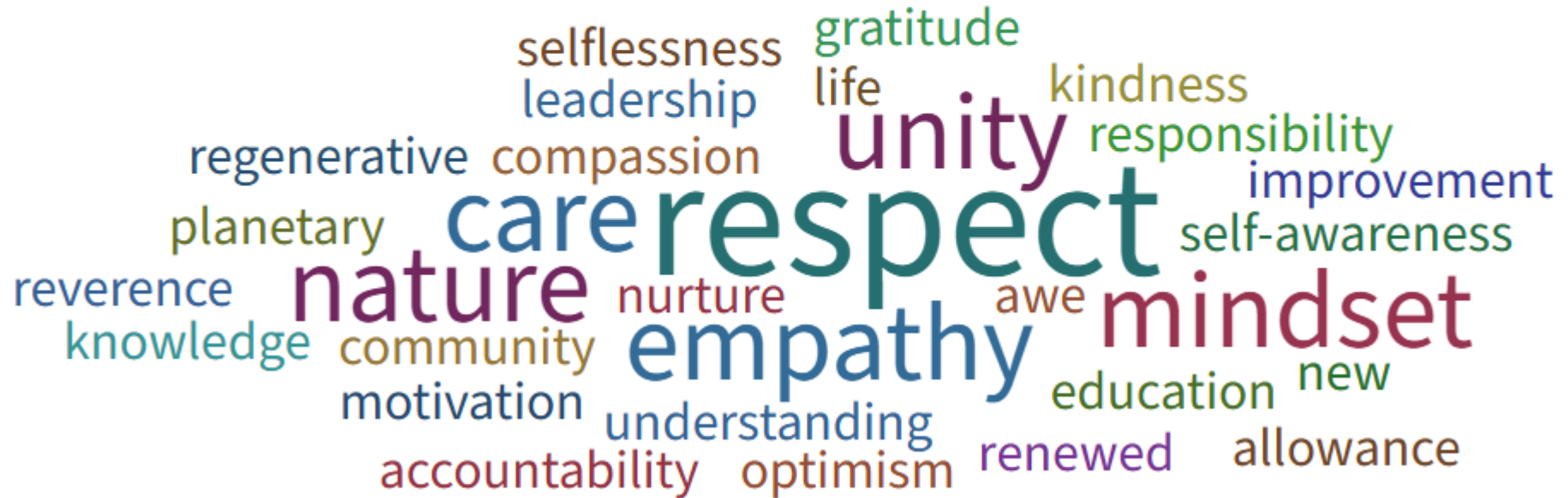
What qualities, values or attitudes do you choose to have in relation to Mother Earth?

What qualities do we need to grow to take care of Mother Earth?

What qualities, value(s) or attitude do you stand for in terms of sustainable development?

What shift in mindset, values, qualities and attitudes do we need to achieve a sustainable future?

stewardship appreciation mindfulness realistic
production oriented real buzzwords
confidence prospects accountability elected
humanism planet belief can-do-attitude
ownership picture leadership
kindness accessible thinking trust courage humility bigger respect
protection bravery trump longer responsibility president care
faith representatives future term collaboration
less-materialistic balance

What qualities, values or attitudes do you stand for when it comes to future generations?

When considering Future Generations what qualities do we need?

Learning Strategy: Attempt to balance Thinking, Doing & Being through the programme

❑ Ecoliteracy
❑ My Contribution

Carbon Literacy Certification for students in module assessment

❑ Long-Term Thinking
❑ Flow in Cycles
❑ Both+And Thinking
❑ Interconnections

Systems Thinking (across all modules)
Both+And Thinking & Normative competency explored in Stakeholder Analysis & decision-making scenarios / Simulations

❑ Reflection
❑ Self-Awareness
❑ Creative Innovation

Reflective reports
Values workshop
Purpose and values & creative innovation in strategy formulation

❑ Oneness with Nature
❑ Mindfulness
❑ Purpose

Nature Connectedness Research
Re-evaluation of purpose
Using 'art and imagery' to surface feelings and values

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Rimanoczy (2021)

Next Steps?

Questions?

Thank you…!

Design and Share session

Step 1 – Individual Reflection (5–7 min)

Each participants reflects on **one key idea/tool** from the workshop they want to adapt in their own teaching practice to embed more authentic strategies.

Step 2 – Small Group Design Discussion (40–45 min)

- Each person shares their practice idea briefly in the group (2-3 minutes each/15-20 minutes)
- Collaborative/feedback discussion within your group (15 minutes)
- Each group feedbacks to the room a couple of actions (one "quick win" and one "ambitious goal" to share) and 1 common theme emerged in the group (1-2 min x group)

Step 3 – Individual Closing Reflection (10 minutes)

What is it that you want to bring forward in your practice as result of today?

What do you want to implement in your teaching practice as a result of today?

Aspects of SMP toolkit at a programmr level for student journey

Thomas Long session on purpose/purpose driven business

Different ways to connect students to nature

Focus on employability by talking about green jobs.

Greater use of artefacts in learning and teaching.

Embed the SMP reflection into the assessment

Promoting more sustainable education Sustainable entrepreneurship and enterprise Evaluation definitely

Lego session, design thinking and systems thinking Exposing students to shocks/dark sides

What do you want to implement in your teaching practice as a result of today?

Evaluation and using realism in evaluations

Open a discussion with the students on their perspective on sustainability and what it means to them.

Explore students surface and deeper values as a starting point to SMPs

Review the evaluation of the modules..

Further develop the 'Being' aspects of the MSc. Consider how to evaluate the programme using the Realist Programme Theory. Deepen the work on Higher Values & Spiritual Intelligence.

Took kit on ourpose, career story telling and higher levels of values.

Change the assessment on my module and reevaluate the use of the SSDG's

Incorporate the use of artefacts and imagery into learning and assessment activities.

It was a wonderful experience to gather such insightful practise and create a network across different institutions. Also discussing the theoretical underpinnings of different toolkits.

learn many things. enjoyed the discussion on sust mindset will integrate system/desi thinking will try realist approach to sustainability; how to connect the sustainability module to the programme.

18

Next steps: joining the SMP-EE project

Phase 2 of the project (cont) – final data collection on student's sustainability competencies increase through using SMP enterprise education toolkit

We will also collect educators' feedback/debrief on their experience of using the SMP toolkit

Briefing webinar in early October 2025 to coordinate your contribution, should you wish to join the project and continue to test the SMP tools in the classroom

References and useful resources

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