

COLLABORATIONS FOR CHANGE

Global Goals for Tomorrow's Education, Today

19TH ~ 21ST JUNE 2018 KEELE UNIVERSITY



*Facilitating interdisciplinarity for life-long and life-wide learning at
University College Cork
Dr Maria Kirrane, Sustainability Officer*

Headline Sponsor



CarbonCredentials



Sustainable Development and Irish HE

ESD in Ireland will aim to:

- balance environmental , social and economic considerations;
- promote **lifelong learning**;
- be **locally relevant** while also linking the local to the national and international;
- engage **all sectors** of the education system, as well as the **non-formal** education sector;
- be **interdisciplinary** and recognise interdependence and interconnectivities across other sectors;
- use a variety of **pedagogical techniques** that promote active and participatory learning and the development of key dispositions and skills;
- emphasise **social justice and equity**;
- focus on values and promote active democratic citizenship and inclusion as a means of **empowering the individual** and the community.
- be an **agent for positive change** in reorienting societies towards sustainable development.

'Education for Sustainability'

The National Strategy on Education for
Sustainable Development in Ireland, 2014-
2020



A N R O I N N | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS

July 2014



Societal challenges for 21st century universities

Education *for* Sustainability transcends Environmental Education (EE) giving individuals knowledge and appreciation of the environment will transform attitudes and behaviour.

Education *for* Sustainability is fundamentally contextual, it must encourage students to explore links between their personal lives and in the contexts relevant to them and their communities (Nathan & Taylor 2003, p.3).

Education *for* Sustainability enlarges possibilities of education and learning to actively engage citizens in sustainability (Jacobi et al 2016).

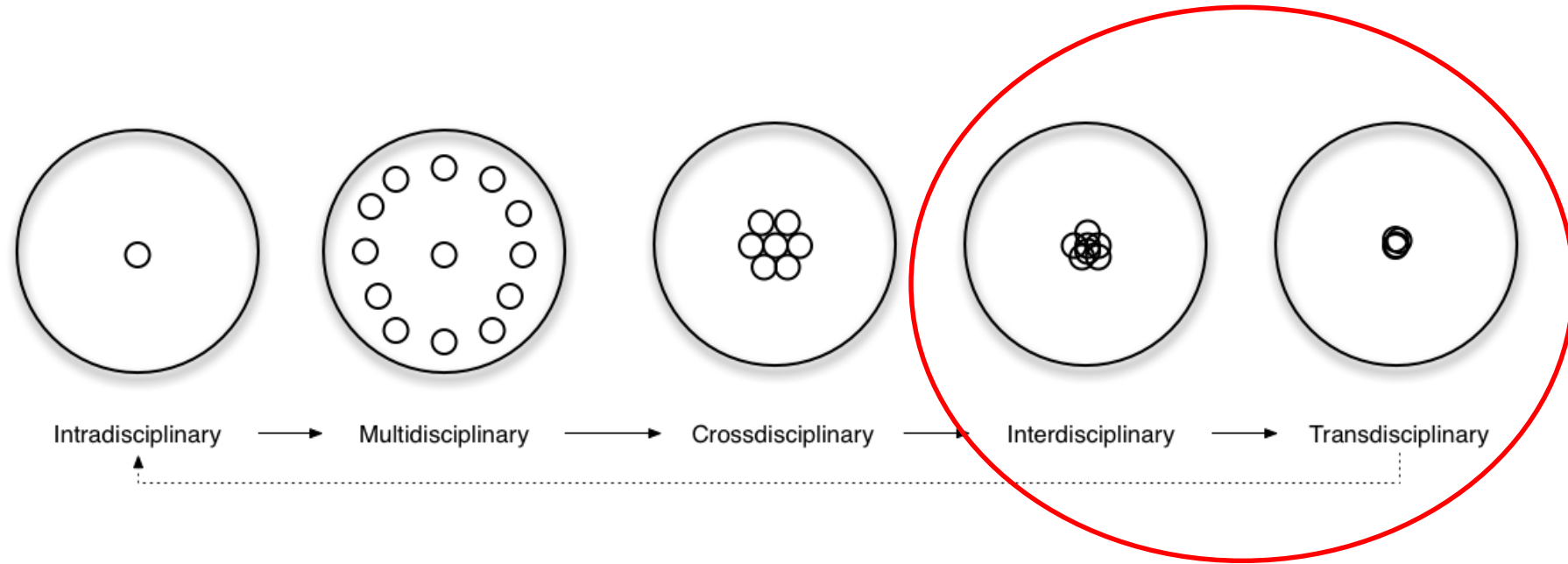


Societal challenges for 21st century universities

Researching sustainability transformations across universities internationally (Ferrer-Balas et al. 2008, p.296) suggests a number of common characteristic features including: **transformative rather than transmissive** education where the emphasis is on

- critical thinking;
- a strong emphasis on interdisciplinary and transdisciplinary research
- a societal problem–solving orientation through multiple interfaces pertinent to societal goals
- leadership and commitment to the transformation of the university, responsive to the changing needs of society.

Moving beyond disciplinary boundaries





Background – Sustainability at UCC

2000

Environmental Research Institute established at UCC.

2015

Observer status UNFCCC
Taskforce on conceptual foundations – environmental policy integration
UN GEMS Water established

2017

Sustainability Officer employed
Cork hosts UNESCO Learning Cities conference

2010/11

First Green Flag awarded
Environmental Citizenship Research Priority Area
Transdisciplinary Conversations workshop

2016

Sustainability Strategy launched
Sustainability module pilot
Transdisciplinary Perspectives book launched

2018

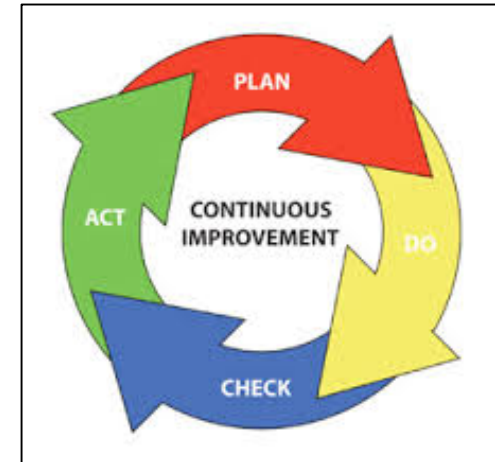
UW Module is streamed to Dingle and Skibbereen
Inaugural Sustainability Summer School



Background – Sustainability at UCC

Green Campus – a seven step EMS programme

1. Form a **Committee**
2. Carry out an **Environmental Review**
3. Develop an **Action Plan**
4. **Monitor and Evaluate** progress
5. **Link to the Curriculum**
6. **Inform and Involve** the community
7. Develop a **Green Charter**



- **Student Led, Research informed, Practice focused**



Background – Sustainability at UCC

- Student focused
- Chaired by Envirosoc and SU
- Staff representation from key operational posts



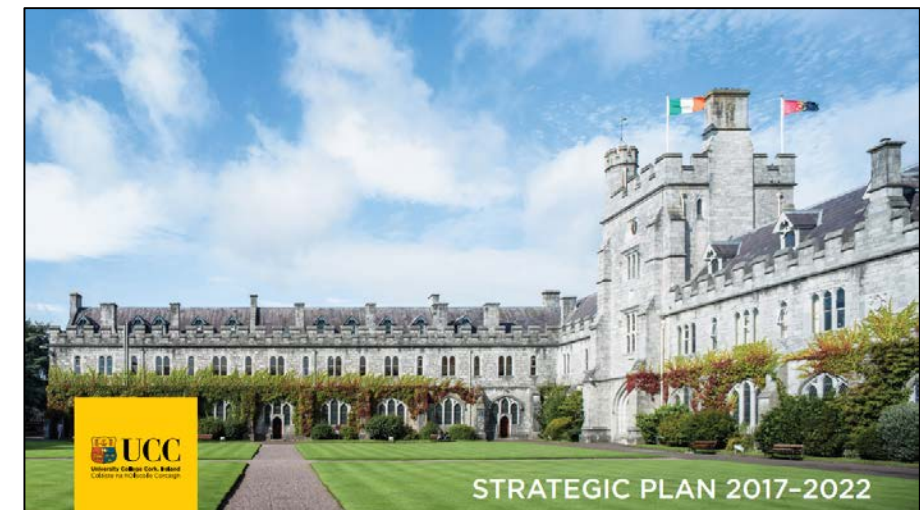
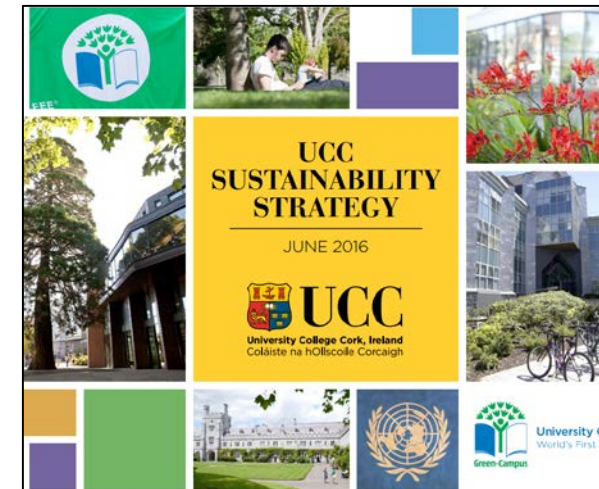
- Buildings and Estates
- Deputy president
- Every six weeks, monitors progress against action plan

- Twice a year
- Chaired by deputy president and Director of B&E
- Academia and contractors



Background – Sustainability at UCC

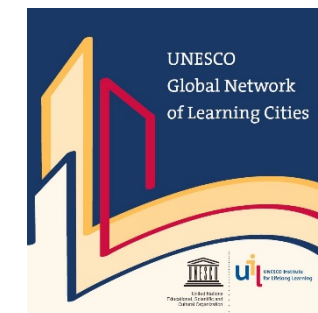
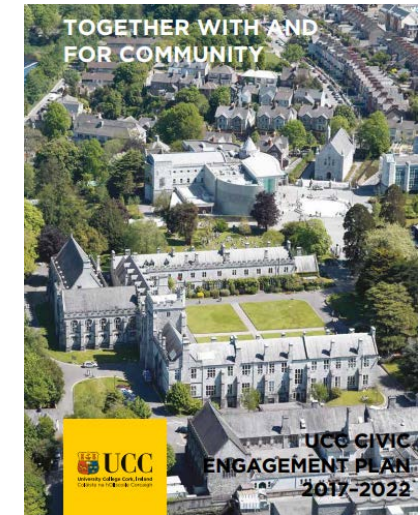
- To facilitate the development and empowerment of **future leaders in sustainability** through our research, teaching and learning activities;
- To engage our student body, staff and wider community in becoming **active citizens for sustainability**;
- To minimise the local, regional and global **environmental impacts** of our educational, research, and ancillary operations, and infrastructural development;
- To enhance the health and well-being of the University and wider community through the facilitation and promotion of healthy eating and living as an integral part of **sustainable living**;
- To be an overall **positive force** in the journey towards creating a sustainable world for all.





UCC broader sustainability ecosystem

LEARNING
Neighbourhood





The sustainability “ecosystem”

Degree of integration (Runhaar et al., 2014; Storbjörk & Isaksson, 2014):

- Differentiation: no coherence, disciplines remain fully independent
- Coordination: procedures and administrative instruments can achieve coherence (incl. adjusted policies or goals) , sectors remain largely independent and distinct;
- Cooperation is characterised as ‘coordination +’ where sectors work together to formulate partially mutual policies
- Integration, a new unit is created and no distinction can be made



Sustainability Strategy - Curriculum

- To understand **and document the environmental or sustainability content** of current academic programmes and curriculum;
- To promote, **increase and raise awareness** of current programmes with environmental or sustainability content across all four colleges;
- To encourage the active participation **in non-formal sustainability education** in particular the Green Campus initiative;
- To encourage and support the development of **sustainability literacy** within teaching and learning
- To capitalise on the diverse nature of student population to **increase students' knowledge** of global sustainability issues;
- Where appropriate, sustainability to be taken into account in discussions leading to **course approval**.



Sustainability Literacy

The ability to 'read' and 'write' one's relations to the rest of human and non-human nature. Includes technical, cultural and social science elements to explore what is possible, appropriate, morally and politically right (Huckle, 2014).

- **Core Curriculum:** “Business as usual” organized along college, disciplinary or externally validated programmes (e.g. Engineering, Environmental Science)
- **Hidden curriculum:** Divergence between what is overtly taught and what students actually learn e.g. the values and beliefs of the institution or the individual lecturers which are unconsciously transmitted to the student, or impact on the institutional environment, thereby affecting student learning – they suggest making the hidden visible through informal learning opportunities, green campus events etc. (e.g. Green campus app)
- **Co-curriculum:** develop sustainability literacy as part of the co-curriculum (optional modules outside the usual programme of study) enabling students to experience teaching by academics from outside their discipline, or estates staff or other students. (University wide module)



UCC – Innovations in “core” curriculum

- Pilot collaborative exercise between chemical engineering and sociology department (Byrne and Mullally, 2016).
- Students from two modules which ran concurrently were brought together for a joint assignment
 - PE3011 Sustainability in Process Engineering
 - SC3029 Sociology of the Environment
- Groups pick any aspect in relation to sustainability and then to research, reflect upon and engage with it, both collectively and individually.
- Short group presentation followed by reflective report.

Group	Chosen ‘sustainability’ related topic
A	Globalisation versus localisation
B	Consumerism—products, resources, environmental and social
C	Chocolate bars and sustainable consumption
D	Habits and their meaning for sustainable development
E	Consumerism
F	Biomimicry
G	Unforeseen and unintended consequences of sustainable development
H	Sustainability in food consumption
I	Sustainability and Ethics



UCC – Innovations in “core” curriculum

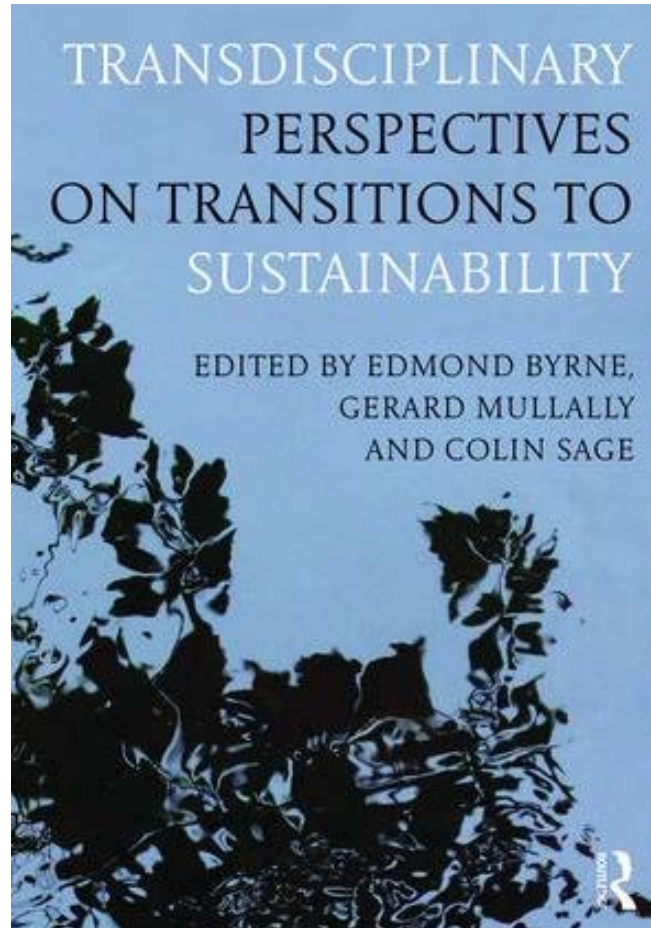
Table 3 Qualitative student feedback—selected comments

1. What are the key learning points or insights or rewarding aspects that you've taken away from undertaking this joint assignment?	Student background
<i>“It was an exercise for critical thinking, which was very enriching.”</i>	PE3011
<i>“Learned that sustainability relates to everything, and should always be critically considered when undertaking any project.”</i>	PE3011
<i>“I learned that group work from working within multiple disciplines, provides a much wider perspective on a given topic, and I found that this type of teamwork is very effective”.</i>	PE3011
<i>“I really liked working with someone who came from a different faculty and has a different viewpoint on sustainability.”</i> <i>“The best part of this assignment is how to work with people with different points of view”.</i>	PE3011
<i>“I really enjoyed working with the engineers because they had great ideas about how to make products last. It was a good opportunity to hear their perspectives.”</i>	SC3029
2. From a trans-disciplinary or international perspective or both, what aspect(s) of the assignment did you find most challenging?	Student background
<i>“Initially I found that working with sociology students was quite difficult as we came from very different backgrounds.”</i>	PE3011
<i>“It was difficult to make a decision on what topic to cover as our viewpoints were a bit different.”</i>	PE3011
<i>“There was so much to say and discuss. We had great fun discussing sustainability. Working in groups was beneficial because we got to teach each other.”</i>	SC3029

“In my view at least, Cork’s students are being prepared for a world that is increasingly connected and increasingly collaborative; for a fulfilling and successful public and private life” (Whitehead, 2014).



UCC – Innovations in “core” curriculum

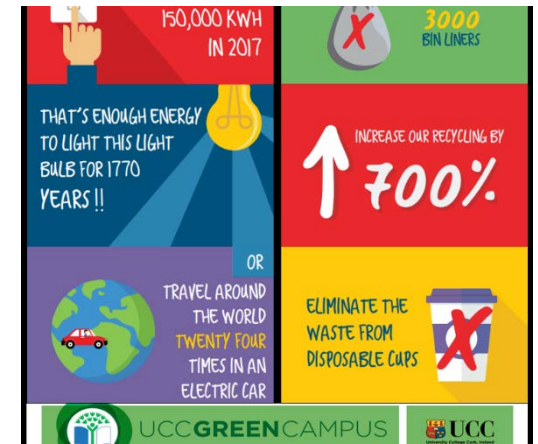


“The UCC Green Campus initiative is an example of this: a cross-disciplinary initiative developed by students and supported by staff from across the university.”

“While this initiative predates the formal transdisciplinary initiatives associated with this book it is certainly a strand among a confluence of institutional initiatives that could be broadly termed transdisciplinary.”

The hidden curriculum

- Students directly involved in behavioural change programmes.
- Procurement, environmental management, marketing.
- Event based pedagogies



Ireland's First Intersiversity BioBlitz

How Many Species Will You Record?

24 Hours To Record Every Species On Campus!

When: 1st - 2nd May



Seven Universities Nationwide!

Most Biodiversity Recorded Wins!



For more information see greencampus.ucc.ie





Co-curriculum: University Wide Module

- January 2016: UCC launched pilot University Wide Module: Sustainability
- The ethos of the module centres on cultivating ‘sustainability citizenship’, within and outside UCC.
- It adopts a blended learning approach that integrates conventional in-class delivery, structured debate and on-line resources and exchange.
- The module is co-constructed, genuinely interdisciplinary and adopts a transdisciplinary approach to sustainability integrating the perspectives of the participants drawn from staff members, students and members of the public in the on-going refinement, re-design and the ultimately in the provision of content.



UCC University Wide Module in Sustainability



Framing Sustainability

Energy and Climate

Sustainable Economy?

Agriculture and Food

Health and Well-being

Culture and Heritage

Ecosystems and Biodiversity

Environmental Governance
and Regulation

Equity and Sustainability

Sustainable Campus/
Sustainable City

Delivering Sustainability:
Problems and Prospects



Framing Sustainability: What does Sustainability mean to you?

Changing Climate, Changing Technologies (Technological Systems)

To grow or not to grow: building a Sustainable Economy

Sustainable Agriculture: Pathways to sufficiency and food security

'Promoting health and well-being for sustainable society'

Culture and Heritage: The past and present of the future

Protecting and restoring ecosystems and biodiversity

Regulating change: law, governance and sustainability

Equity, diversity and inclusion for social sustainability

Putting Sustainability in its Place

Making connections: Co-creating a Sustainable [community?]
Society [Panel Discussions]

University
Wide
Module:
Pedagogy

Integral approach to learning/teaching

Subjective:

Personal engagement with module &
Out-of-Class Reflection by INDIVIDUAL STUDENTS:
e.g. online weblog, diary, reflective pieces and/or
portfolio based on experiences drawn from each
the angles. Contribute towards Assessment.

Inter-objective:

Structural Context:
structures, delivery modes
and assessment designed to
facilitate each of the angles
presented here.



Objective:

In-Class Content Delivery by LECTURER:

e.g. 25 minutes of traditional lecture
format.

Supplemented by online notes, readings,
handouts, etc.

Inter-subjective:

In-Class Based Discussion, Discourse and
Dialogue among STUDENTS (& LECTURER/S)
COLLECTIVELY:

e.g. 25 minutes around certain aspects/topics
to draw out and develop emergent/novel
understandings/develop 'culture' around
sustainability by actors of various (disciplinary
and other) backgrounds



Co-curriculum: University Wide Module

Built on

- A student-led, research informed and practice focused approach.
- Openness to contributions and participation across all of UCC and free to the public
- A favourable institutional ecosystem
- A co-created design, with a built-in mechanism for evaluation, review and redesign
- Prior experience of interdisciplinary and transdisciplinary collaboration

Developed through

- A series of plenary meetings and the establishment of a working group (September–December 2016)
- A discussion paper was developed and circulated
- A delivery model was agreed upon
- The experiences and proposals for redesign from participants were reviewed through a World Café
- This entire process was evaluated in a workshop for contributors



University Wide Module in Sustainability

Accreditation

- Accredited module – 5 ECTs part of a programme (under graduate or post graduate) - formal assessment
- CPD – non credit bearing continuing professional development (e.g. Engineers, Accountants) - some assessment
- Micro-credential using digital badge – some minimum level of participation and evidence of learning
- Participation - certificate of attendance

“I feel that the introduction garnered the students interests and instilled a sense that great academic minds are fighting for the environment. I found it quite encouraging that I, along with the other students, were in a sense being invited to join in this academic movement.” Anonymous participant.





University Wide Module in Sustainability

Assessment is three-fold via:

a) a Learning diary, b) Group Project, c) Reflective essay

Group project:

- Multi-, inter-, trans-disciplinary groups
- Choose an SDG of interest
- combine text, photographs, animation, poetry, art, video recorded on a mobile phone, cartoons, newspapers articles etc. in a joint presentation (everyone contributes skills, evidence, technical abilities) as a contribution to co-constructing the module and an example for future participants.

UW0005 - Learning Diary

Please submit your weekly learning diary entries using this form. Be sure to keep a copy for your own records!

* Required

Name *

Your answer

Week *

Choose

What were the key topics covered in this session? *

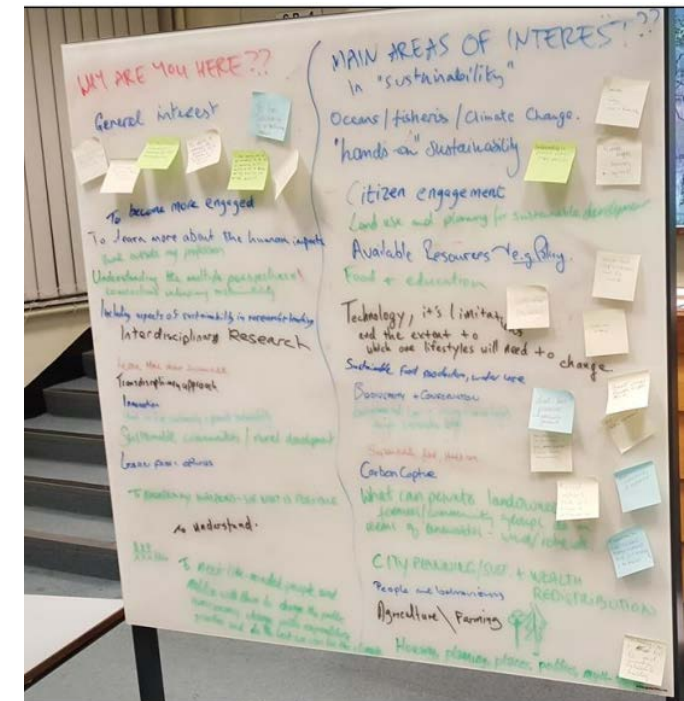
Your answer

What's the most important aspect from your perspective? *

Your answer

What did you learn that was unexpected? *

Your answer





2018 – beyond the “Ivory Tower”

- The module was always open to the public, but in 2018 added dimension of streaming to two towns in rural Ireland via local innovation hub network.
- Not a MOOC
 - Local context
 - Group element is key
- 25 local participants in Dingle, now working on group demonstration project in the town.

“From my perspective the most important thing is how to put me in the sustainability picture.” Anonymous participant.

“The issue of tourism, and the effect on affordable housing, came up within the group working on the presentation; it is one of the key issues affecting Dingle town...it is being exacerbated by the reliance on the tourism industry for the local economy.” Anonymous participant.



2018 – Inaugural Summer School in Sustainability



Outline

The Sustainability Summer School "Global Goals, Local Actions: Making Sustainability Work" is a collaboration between University College Cork, Ludgate Hub, University of Massachusetts Lowell, and UNAL Colombia. The school is open to advanced masters, early stage PhD students and sustainability practitioners at each institution. The school will take place between UCC and Ludgate Hub in Skibbereen, West Cork in the week commencing 21st May 2018.

University College Cork was the first university in the world to be awarded a Green Flag from the Foundation for Environmental Education. The programme, which was piloted at UCC is now being run in 14 countries worldwide. UCC was also the first university in the world to be accredited with ISO50001 for energy management. More information on UCC's Sustainability activities can be found at greencampus.ucc.ie.

Details

The summer school will take an interdisciplinary approach to exploring themes of sustainability at local, national and international level. The school will focus on the Sustainable Development Goals and how society can "make sustainability work" through incorporating people, planet, peace, prosperity and partnership. Food, as a "nexus" theme that connects all SDGs, will be explored from both business and rural development perspectives. The summer school will build on the existing partnerships between the institutions and enable knowledge-sharing around each institution's strengths and specific contexts. The programme will include lectures, keynotes, group works and site visits.

Learning outcomes

- ✓ Participants will be able to apply concepts of sustainable development to address sustainability challenges in a local and global context.
- ✓ Participants will gain an understanding of sustainable development from multiple disciplinary perspectives.
- ✓ Participants will have developed a project submission for seed funding at their home institution





Where next?

- Formal Curriculum: UCC Academic Strategy -
 - UCC is committed to implementing an academic strategy to deliver an outstanding, student-centred learning and teaching experience with a responsive, sustainable, research-based curriculum at its core.
 - Our institutional focus on transdisciplinary thematic areas will be informed by UCC's Research Strategy as well as external drivers including the United Nation Sustainable Development Goals. Finally in this context, UCC's Strategic Plan 2017-2022 underscores our ambition to implement UCC's Sustainability Strategy 2016.



Where next?

- Informal Curriculum
 - Learning spaces – nature trails
 - Living Laboratory
 - Creative practice – Glucksman Gallery





Facilitating inter- and trans- disciplinary

- Tilbury (2015) notes that in any given institutional setting there will be variety of motivations or points of engagement with education for sustainability, including:
 - the scientific challenge,
 - moral concerns
 - student employability.
- All of these concerns can provide a useful starting point.
- Need to be attuned to institutional priorities i.e. the direction that the university is moving.
- Experience from *Chalmers University of Technology* (Mulder et al., 2015, p.228) suggests three key building blocks for change programmes:
 - (1) Create a neutral arena/organization,
 - (2) Build on individual engagement and involvement (bottom-up),
 - (3) Communicate a clear commitment from the management team.

Thank you



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The University and College Sector's Collective Response to the Global Goals



End extreme poverty, inequality and climate change

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www.sdgaccord.org

