

**Date:** Friday 18<sup>th</sup> March

**Venue:** 2.03 Charteris Land, University of Edinburgh

Slides available here: [www.sustainabilityexchange.ac.uk/interdisciplinarity\\_and\\_sustainability\\_teaching](http://www.sustainabilityexchange.ac.uk/interdisciplinarity_and_sustainability_teaching)



## **Interdisciplinary and Sustainability Teaching Education for Sustainable Development in Higher Education Topic Support Network**

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### **ATTENDEES:**

Dana	Abi Ghanem	The University of Manchester	
Simon	Allen	The University of Edinburgh	
Kenneth	Amaeshi	The University of Edinburgh	
Sharon	Boyd	The University of Edinburgh	
Alan	Britton	University of Glasgow	
Eileen	Cook	SRUC	
Liz	Cooper	The University of Edinburgh	
Chris	Doran	University of Salford	
Donald	Gray	University of Aberdeen	
Vitalia	Kinakh	The University of Manchester	
Jackie	Malcolm	University of Dundee	
Romas	Malevicius	University of Salford	
Mary	McCulloch	University of Stirling	
Susan	Mclaren	The University of Edinburgh	
Rebecca	Petford	EAUC	EAUC Coordinator
Mike	Pretious	Queen Margaret University	Convenor
Hannah	Ritchie	The University of Edinburgh	
Heather F.	Ross	The University of Edinburgh	
Andrew	Samuel	Abertay University	
David	Somervell	The University of Edinburgh	
Petros	Tsitnidis	Leeds Beckett University	
Alec	Wersun	Glasgow Caledonian University	
Rehema	White	University of St Andrews	
Alette	Willis	The University of Edinburgh	

### **APOLOGIES:**

Susan	Brown	The University of Manchester
Christine	Gordon	Highland Council
Christine	Haddow	Edinburgh Napier University
Jennifer	Hume	City of Edinburgh Council
Betsy	King	Learning for Sustainability Scotland
Kirsten	Leask	Soil Association Scotland
Kate	Thornback	SRUC

### **WELCOME AND INTRODUCTIONS**

Everyone was welcomed to the meeting, with particular thanks to those who have travelled far. A large number of people responded to the call for case studies, so there is a very full agenda.

## PRACTITIONER PRESENTATIONS: INTERDISCIPLINARY SUSTAINABILITY COURSES

### **Kenneth Amaeshi, Sustainable Business Initiative, University of Edinburgh** – see [slides](#)

- Challenging to engage with colleagues in other schools due to differences in vocabulary and framework – lonely journey. No Community of Practice in the Business School of researchers interested in sustainable business, but new students and faculty members in this space.
- [Sustainable Business Initiative \(SBI\)](#) has been a research centre since 2011, bringing together colleagues interested in sustainability – teaching revenues go to own group however, not SBI
- SBI support University of Edinburgh chapter of [Net Impact](#), a global platform for students interested in sustainability
- Involved with Innovative Learning Week (ILW) at University of Edinburgh – won the ILW ‘Most Impact Award’ for [visualising sustainability in picture format competition](#) collaborating with Edinburgh College of Art, Zero Waste Scotland and other internal departments, to encourage thinking beyond silos and disciplinary boundaries. Also held 3 events in 2 days on alternatives to capitalism, including a circular economy lecture, a circular economy challenge, and the launch of the Finance for the Future Awards (an [ICAEW](#) event) which brought together professional accountants and students.
- Reach out to practitioners in the workplaces through Masterclasses, including upcoming one on [Building a Sustainable Business](#) which hope to impact real world. High price to participate reflects value of event and attracts dedicated delegates.
- Trying also to engage with Scottish Business in the Community and Scottish Enterprise to share expertise

### **Sharon Boyd, Royal (Dick) School of Veterinary Medicine, University of Edinburgh** – see [slides](#)

- Developed sustainability content within a second year course which is part of the five year undergraduate veterinary course – student research component foundation course, which develops research skills
- Group project, encouraging vet students to select a topic of anything but something within the veterinary curriculum – reactions are varied!
- Institutional academic development project, evidencing ESD in undergraduate veterinary education, meant project was tweaked to make it more explicit
- This year students could focus on a species group, but through a topic not in the curriculum but could be covered in work-based placements. List of sustainability-related topics provided to choose from.
- Requirements were a group presentation, a blog post and a poster – as required by veterinary conferences
- Great response from students and those who saw posters on display
- Students being given editing rights back to decide whether the University can compile their work and make it public
- Next year a prize system will be implemented, as suggested by those who saw the posters
- A lot of students included a call to action in their work, asking readers / listeners to take note of the impact of humans on animal species and systems and be part of making change

### **Alan Britton, University of Glasgow** – see [slides](#)

- Many projects ongoing at the University of Glasgow including food waste and security
- School of Education embedded Learning for Sustainability (LfS) across all courses
- Relevant paper on teacher education and John Muir Award accessible [here](#)
- Interdisciplinary Learning (IDL) and sustainability in teacher education helps teachers learn about and through IDL.
- 3<sup>rd</sup> year core course includes interdisciplinary sections including Expressing the Unseen, Becoming Global Citizens and Living with Biodiversity, which contain a range of subject areas

(not all areas, just covering what is possible). Underpinning emphasis on Professional Standards (GTCS), and then taken through to practice.

- Generic theory of IDL within the Curriculum for Excellence, which is not bad at primary level but variable at secondary
- Students assessed on interdisciplinary understandings and application
- In 4<sup>th</sup> year the social subjects modules focus in on LfS in Scottish Education.
- Next year will be adding an interdisciplinary elective in LfS and Citizenship
- Interdisciplinarity is not doing every subject all the time, just covering what is possible and relevant for topic, so teachers can select the tools and issues of relevance to them on the job

**Donald Gray, University of Aberdeen – see [slides](#)**

- Curriculum reform process started in 2010, with new '6<sup>th</sup> Century Courses' available from 2011 offering both breadth and depth at 1<sup>st</sup> and 2<sup>nd</sup> year level. Courses have to involve at least 2 of the 3 university colleges, and so be interdisciplinary.
- Around 12 developed, including Sustainability: Challenges and Opportunities, Oceans and Society, Sustainable International Development, Natural World, Humans and Other Animals etc. Each was for 12 weeks on Wednesday mornings for 3 hours so they didn't clash with other classes.
- Structured based on who was interested and relevant to a shared subject
- 'Sustainability: Challenges and Opportunities' – capped at 80 due to staffing, included a field trip, assessed by essay and poster (peer-assessed and group work) on a local issue.
- New 'Africa – Sustainable Development for All?' module developed out of the University's [FutureLearn MOOC](#) has over 100 students signed up
- 'The Natural World' course gets the students out a lot, with a field notebook of reflections on thoughts and values as coursework
- Environmental Humanities programme under development, to be offered as a postgraduate joint degree with biology, anthropology or history
- Students opt into either a 6<sup>th</sup> Century course, Sustained Study (usually a language) or a Discipline Breadth course both first and second year, so advisers are aware of opportunities
- Usual timetabling challenges as most courses only run one semester a year

**Jackie Malcolm, Duncan of Jordanstone College of Art & Design, University of Dundee – see [slides](#)**

- Using nature to inspire - 'Design Values, Issues and Ethics' module – running for 4 years
- Interdisciplinary level 3 optional module, designed using HEA 2009 Recommendations and UNDESD Goals for Reforming Education
- Aims and Objectives outlined on slides
- Key questions – could nature be a catalyst for more ethical design practice, and could reflexivity facilitate self-realisation in students
- Maximum capacity is 25 students
- Worked with a PhD Student focusing on biomimicry who developed 4 workshops on biophilia, biomimicry, resilience and symbiosis
- Assessment through practical project submissions (interdisciplinary group, some examples shown), reflexive article (following project in Dundee Botanic Gardens) and module evaluation
- Developed REASON design process – Research, Ethics, Analysis, Selection, Outcome, Nexus – where nexus is the reflexivity element
- Multiple 'ethics' embedded, and harder to communicate than anticipated!
- Aim that 'Practical Conscientiousness' (Giddens, 1984) would become a natural response
- Facebook group to collect ideas for stimulation
- Important for the educators to be reflexive too

**Susan McLaren, University of Edinburgh** – see [slides](#)

- School of Education module on Global Learning: Citizenship and Sustainability (EDUA10151)
- Elective open to all but housed within the School of Education, aimed at encouraging understanding of interconnected systems, providing different perspectives, and evaluating complex professional issues
- Different backgrounds and levels (UG & PG) of students, but all performed well and equally
- Meets teacher education standards
- Taught parallel to assignment: 2000 word case study into a local impact of a global issue, and evaluation of an educational initiative engaging with that issue locally (in any setting)
- Pulled next year (“staff time”), which means established interdepartmental engagement and engagement with external organisations will be lost. Concern as to where students will receive their necessary LfS training now.

**Hannah Ritchie, Online Learning Educator, University of Edinburgh**

- New online course on Sustainability and Social Responsibility launching next academic year, aimed at all 1<sup>st</sup> and 2<sup>nd</sup> years, for 20 credits (200 hour workload) over one semester
- Aims are to allow all students to gain a basic understanding of sustainability by attracting people from all schools, giving all students a positive experience of online learning (the emerging ‘lifelong’ model), and minimising travel impacts
- Only for on-campus students (at least initially)
- No timetabling problems (or excuses) for students, many tutorial options
- No commitment concerns by staff as presentations can be recorded and used again
- Exploring: what is sustainability, why is it important, systems, planetary boundaries, environmental dimensions, shaping solutions (social aspects), taking things forward (personal, communications, education)
- Sacrificing depth for breadth – aiming to provide an introduction and suggest the complexities – interdisciplinary with 13 of around 20 schools contributing
- No exam but 3 assessments: personal footprint, reflection and reduction target; interdisciplinary group project redesigning a convenience product and selling it; personal 3 minute video pitch to convince someone within their field why sustainability matters to them and why they should contribute
- Complexity around interdisciplinary collaborations connected partly to money flow, as recommending students take option modules in other schools means home school loses money. This is joint Geoscience and Education collaboration (lead organisers’ departments).
- Interdisciplinary ‘[Our Changing World](#)’ evening lecture series is also 1<sup>st</sup> year module open to all departments (with inclusion of tutorials and assessments) which has been running for a number of years. This highlights key global challenges rather than offering breadth, and is now run by the Department of Sustainability and Social Responsibility.

**Andy Samuel, University of Abertay** – see [slides](#)

- Whole university approach changing through curriculum reform and establishment of ‘Abertay Attributes’, which are intellectual, professional and personal and grounded in Geddes’s ideas of head, hand and heart. Moving from 4 x 15 credit modules to 3 x 20 credit modules a semester as part of this. Taken a long time to develop!
- Inclusion of elective level 1 modules open to all in 1<sup>st</sup> and 2<sup>nd</sup> year (7 this year, 14 next), which students must take two of. Almost all of these relate to sustainability.
- Lead on ‘Sustainability in Scotland: Innovating Locally Transforming Globally’, which involves world issues and wicked problems, speakers on local issues, a field trip, and a carbon footprint exercise
- Want to develop a ‘with sustainability’ stream for degrees – need to get staff and student buy-in and deal with institutional structure issues
- Future work can tie in to the regional agenda around Dundee

## PRACTITIONER PRESENTATIONS: INTERDISCIPLINARY SUSTAINABILITY DEGREES

### Rehema White, University of St Andrews – see [slides](#)

- St Andrews offer both an undergraduate and postgraduate degree in Sustainable Development – focus on the SD undergraduate (MA/BSc) programme running for 10 years
- Have had up to 300 students in the first year module which is open to all
- Principles of mixing the fear/crisis message with one of alternative futures (hope), tying in the needs of future generations, social justice, and environmental issues
- Developed their own definition of sustainable development
- Programme aim: Enable students to critically interrogate the principles, practice and plurality of sustainable development and contribute to the evolution of innovative, interdisciplinary thinking and action necessary to move towards more sustainable futures
- Aspects explored on slides: Critical Interrogation, Interdisciplinarity (in both model and function of delivery), Pedagogy (transformative learning and multiple skills), Curriculum (identified priority areas and cross-cutting themes, breadth but with depth in some case-studies), Local-Global Perspective
- Structure is core modules with options from other schools. SD sub-honours can be accepted as a pre-requisite for access to particular honours modules in other schools, in student didn't take the sub-honours course. Students encouraged to form a 'pathway'.
- 60 credit dissertation in 4<sup>th</sup> year, with research methods taught in third year
- Doing interdisciplinarity well requires reconciling epistemological incompatibilities, linking teaching staff, discussing it with students, offering synthesis lectures, providing frameworks, working with themes / case studies, providing a range of assignments and 'making it real'
- Assignments and activities in the past included carbon footprint and reduction, willow educational displays, 4<sup>th</sup> Year trip to Findhorn
- Links to Estates, research, governance, wider community, and groups such as Transition University of St Andrews
- Did well in terms of awards and league tables
- Changes – some modules have been cut, staff changes lead to loss of knowledge and understanding of theoretical underpinning, less input from other disciplines (now mostly taught within Geography and Geoscience), loss of fieldtrips and innovative assessments
- Challenges – establishing buy-in at a senior level as well as locally, embedding degree into wider University structures, staff resourcing (takes time and relationship building), need to permit innovation, perhaps a need to recognise stages in programme growth (and demise)
- Interdisciplinarity in sustainability teaching is necessary but hard, both within and across modules. Necessary to consider curriculum and pedagogy, and theoretical underpinning.
- Engage with practice within and beyond the institution
- Never feel comfortable that the programme is established!

### Simon Allen, University of Edinburgh – see [slides](#)

- School of Geoscience at University run an MSc in Environmental Sustainability as part of a suite of MSc programmes which share courses to provide breadth and interdisciplinarity. SRUC partner on offering 3 of the courses.
- Launched in 1997 by the interdisciplinary Sustainability Centre, taking up to 35 students each year from a wide variety of backgrounds. Now housed in School of Geoscience.
- Course structure – 6 x 20 credit courses (2 core) plus dissertation (15 weeks, 20,000 words).
- Core modules:
  - 1) Principles of environmental sustainability – big picture, with interdisciplinary integrating framework and core principles as the structure. 90% taught by Simon (learned on the job and took over from guest lecturers to ensure course coherence). Assessed by an essay and exam.

- 2) Case studies in sustainable development – solutions orientated, featuring external speakers and group projects working with the Social Responsibility and Sustainability Department on University of Edinburgh operational challenges. Developing the skills to communicate outside of academia. Assessed by policy briefs and group presentation.
- Option choices from the other MScs in this area – some run by SRUC and some the School of Social and Political Science
  - Interdisciplinarity achieved by following key questions without thinking about disciplines, being open minded, attracting a diverse group of students, encouraging discussion and interaction, sharing courses (breadth), and developing good relationships with other departments and external organisations and individuals
  - Challenges:
    - Academic – breadth vs. depth (in reading as well as core content), varying interpretations between presenters, epistemological issues around assessment
    - Organisational – complex, timetabling, dissertations (covering all interests, availability of supervisors), working against academic culture
    - Students – recruiting (varied understandings of course focus), case studies can be less relevant to overseas students, shifting interests (including more from problems to solutions), differing level of personal engagement with issues

## **DISCUSSION – SHARED CHALLENGES, POSITIVES AND FUTURE ACTIONS / COLLABORATIONS**

### **Governance**

Challenges:

- TEF / REF league tables
- Neoliberal global agenda
- Wicked problems and sustainability challenges
- SFC don't support letters of grant sustainability like HEFCE
- Need statutory obligation for sustainability in outcomes
- Lack of managerial accountability
- Separate rather than embedded Learning for Sustainability (LfS) in higher education

Positives / opportunities:

- Good work with the UNDESD and SDGs
- QAA sustainability inclusion
- Schools doing well with Curriculum for Excellence, outdoor learning, One Planet Schools
- 4 year degrees are an opportunity for broad education and LfS
- Good HE community
- EAUC TSN and LfSS Task Group Support
- Student support for LfS
- Community and Transition Universities
- Good examples out there

### **Academic**

Challenges:

- Different ways of looking at things
- Epistemological differences in definition of sustainability
- 'Ownership' issues – courses, subjects, specialisms – lack of sharing
- Research vs. teaching priorities

Positives / opportunities:

- Enthusiasm and interest in interdisciplinary study
- Scope and desire for embedding sustainability into courses – not standalone

- Potential to integrate guest speakers / integrate external assessment / industry perspectives to provide practical theory and different perspectives
- Power and visibility of sustainable academies
- Does demand lead to supply of teaching??
- Institutional scale – small has advantage of easier change, large has more links

## **Students**

Challenges:

- Courses can be shut down regardless of student numbers
- Timetabling challenges
- Demand for modules vs. programmes
- Uncertain market for job opportunities
- Streamlining of topics
- Mixing science and social sciences difficult

Positives / opportunities:

- Clarification of ways of thinking and sustainability definitions for different fields
- Development of graduate attributes
- Skillsets core to interdisciplinary thinking

## **Partnerships – Both within and outwith each HEI**

Challenges:

- Territoriality
- Silos
- Interdisciplinary work can be seen as a threat
- Ivory tower ideas
- Getting the balance of work / life
- Need senior management buy-in

Positives / opportunities:

- Using the SDGs
- Making the Most of Masters – work-based placements
- Gathering like-minded people with shared goals
- University as a living laboratory
- Case studies in sustainable development
- GCU rebranded as ‘University for the Common Good’
- Space for innovation (physically, time and intellectual)
- Action learning / action research
- ‘Ways to wellbeing’
- Trans-/Multi-disciplinary opportunities
- Co-/Extra-curricular opportunities
- Sharing and celebrating what works – recognition
- Student-led initiatives – ENACTUS, Net Implact, SHRUB Co-op, Social Enterprise, Transition
- Reaching out to feeder schools

## **Reflections and Actions**

- Lucky in Scotland that Higher Education is still publicly funded and accessible at undergraduate level
- Role for TSN / Task Group in responding to TEF? Engage with Learning and Teaching Subcommittee for Education Scotland, who can be influential

## **AOCB**

### **Next Meeting**

Great to have such wide attendance.

Potential to have a repeat workshop, or focus in on a subject. Could focus in on Business Education, as that is a focus for a number of people here, or Teacher Education.

GCU (Alec Wersun) happy to host.

### **Sustainability Literacy Test**

Developed to support HEIs to assess the sustainability literacy of students when they graduate, assessing the minimal level knowledge in economic, social and environmental responsibility applicable all over the world. Find out more on their [website](#). Both EAUC and PRME (see below) are involved in its development.

### **Principles for Responsible Management Education (PRME)**

Alec Wersun is Vice-Chair of the UK and Ireland Chapter of PRME (~60 members), launched at the 2007 UN Global Compact Leaders Summit. Mission is to inspire and champion responsible management education, research and thought leadership globally. Universities sign up by committing to six principles (and pay a fee) at the Principal/Dean of Business School level, and to retain status need to report on how the principles are being integrated. Transformational model exists on embedding the principles, with reports on website to look at. Issue working groups discuss areas such as poverty, climate change, gender etc. PRME have an annual conference. Find out more on their [website](#).

Potential for PRME, EAUC and LfSS to work together.

## **THANKS AND CLOSE**

Thanks to all presenters and attendees. A survey will be circulated shortly, and minutes and all presentations shared once compiled.

Please use the EAUC-UCCCFS-ESD-HE JISCMail list to share any relevant items or ask questions of your peers. Contact [Rebecca](#) if you are not on the list or would like more information about it.

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