

Date: Monday 20 May 2019
Time: 10.30am – 3pm
Venue: University of Edinburgh
Resources: [Available here](#)

MINUTES:
EAUC-S ESD Topic Support Network

Attendees:

Abhishek	Agarwal	Robert Gordon University	AA
Alex	Luetchford	Edinburgh College	AL
Betsy	King	Learning for Sustainability Scotland	BK
Claire	Furniss	Edinburgh College	CF
Donald	Gray	University of Aberdeen	DG
Mary	Collacott	Individual / University of Edinburgh	MC
Rehema	White	University of St Andrews	RW
Scott	Strachan	University of Strathclyde	SS
Stephen	Marshall	University of Strathclyde	SM
Steve	Haden	Dundee and Angus College	SH
Lauren	La Rocca	EAUC	LL

Apologies:

Alaa	Al Khourdajie	University of Edinburgh
Ron	Mackay	Edinburgh College

	SUMMARY OF DISCUSSIONS	ACTIONS
1	<p>Welcome and Introductions</p> <p><i>Rehema White, Academic, University of St Andrews</i></p> <p>Everyone was welcomed to the event and invited to introduce themselves to the room.</p>	
2	<p>EAUC Update</p> <p><i>Lauren La Rocca, Sustainability Engagement Project officer, EAUC-Scotland</i></p> <ul style="list-style-type: none"> • Living Labs Guide available now on our website • EAUC Influence! Conference – 19/20 June (Member's Day 18 June) at University of Manchester • EAUC Scotland Conference – 26 November 2019 at The Lighthouse in Glasgow • Green Gown Awards – applications are open until the 5th June. Scottish institutions have historically done very well so we would encourage everyone to enter. • EAUC-Scotland Forum – Mon 24th June 2019 (virtual meeting with regional hubs in Aberdeen, Dundee, Edinburgh & Glasgow) 	
3	<p>Introductory Activity – Defining innovative pedagogy</p> <p><i>Rehema White, Academic, University of St Andrews</i></p> <p>Everyone participated in a post-up activity answering the following questions:</p> <ul style="list-style-type: none"> • What is innovative pedagogy to you? • Examples of innovative pedagogy – what are you doing and what do you want to know more about? <p>Responses</p> <p>What is innovative pedagogy to you?</p> <ul style="list-style-type: none"> • Learning – learning from each other, learner based, engage directly with community, student led course design, cooperative learning, students teaching students, real-life practical engagement, something transformative resulting in action change, capture imagination of students, fun learning with a message, creativity in all forms • Teaching – stepping away from lecture format, new ways of engaging students, anything from student-paired discussions to fields trips, aligning method to context, process and faculties requiring new ways of thinking, new ways of assessment • Methods – challenge standard assessment, use of innovative technology, debates and discussions, engage the senses in new 	

	<p>ways, provide a different perspective on an area/issue, vertical projects, systems thinking and critical thinking, skills-based approach, interdisciplinary</p> <p>Examples of innovative pedagogy</p> <ul style="list-style-type: none"> • What are you doing: debates/discussions on real-life issues, online quizzes, role playing, undergraduate research experiences, undergraduate entrepreneurial experiences, research based education, vertically integrated projects, performances, willow weaving, design, drama, storytelling, think/pair/share, community projects, conversation based teaching, outdoor learning, living labs, cross disciplinary approach • What do you want to know more about: peer group learning, flipped learning, theoretical approach, transformative learning, experiential learning, student-centred learning, jigsaw learning 	
<p>4</p>	<p>Exploring pedagogy – linking learning for sustainability and innovative teaching</p> <p><i>Rehema White, Academic, University of St Andrews</i></p> <p>Presentation available to download</p> <p>Why alternative pedagogy?</p> <ul style="list-style-type: none"> • Opening up to different ways to teach can be empowering • Various ways of educating the educators (college and university teachers/lecturers are not necessarily taught to teach — often mirror how they learned) <p>Concepts</p> <ul style="list-style-type: none"> • Why we need to think about pedagogies in Learning for Sustainability (LFS) • What are innovative pedagogies? • What forms might they take? • Challenges and solutions • Conclusions <p>Why Learning for Sustainability?</p> <p>Purpose of LFS — normative area of learning — learning for change, want change to create a better world</p> <ul style="list-style-type: none"> • not just learning <i>about</i>, but learning <i>for</i> sustainability <p>UNESCO definition – improve access to quality education on sustainable development at all levels in social contexts, to transform society by reorienting education and help people develop, knowledge, skills, values and behaviours needed for sustainable development</p>	

Competencies Framework

How to assess people have gained an education for sustainable development

- Framework is not just what people have been taught but the competencies and skills gained
- Competencies:
 - Anticipatory — how do you vision the future; looking back at history but forecasting (scenarios, risks)
 - Systems thinking — key aspects of systems (adaptation & resilience)
 - Interpersonal — skills around mediation and conflict resolution; address situations which are controversial and how to generate critical and respectful debate; communication skills and empathetic responses within the debate; transcultural thinking
 - Normative — development of worldviews and multiple perspectives and how to balance conflicting views; ethical questions; what is wellbeing for people and planet in different contexts
 - Strategic — planning, decision-making, how do we learn, how do we organisation
 - Intrapersonal — importance of reflection, stress management; connection with self; mental wellbeing

And then specific competencies for different subjects

- Different teaching methods are important, more than just transferring information, but about preparing people to be responsible actors and think about the kind of world they want
- Vision 2030 Report — linked outdoor learning and global citizenship

Pedagogy (+ Curriculum)

The methods and practices of teaching, including styles, feedback and assessment, and theory

We are here to today to look at pedagogy. It seems that at universities and colleges, we predominantly focus on curriculum, and less time is spent on pedagogy.

When we talk about pedagogy there are broad schools of pedagogy to consider:

- Behaviourism — teacher centred (eg lecture based, subjects separated)
- Constructivism — learner centred, learning through experience and reflection (eg projects, often outdoor learning)

- Social constructivism — teacher guided, student centred, a collaborative learning process (eg individual, small group and varied work)
- Liberationist — critical pedagogy, student centred, co-learning with teacher, democracy in class (eg student led topics, dance, performance) (empowerment – Freire – said that if you have a form of critical pedagogy can instil a sense of democracy of learners that they can then use to overturn their oppressor); Students are themselves selecting what to learn and moving away from notion of just information and instead developing capacities to challenge vision and futures that the learners may or may not want

Innovative Pedagogies

What does this mean:

- New to you?
- Not currently used by your programme, department or institution?
- Novel for Learning for Sustainability?
- Innovative for FHE?

What forms might innovative pedagogies take?

Not able to make full, radical changes immediately, instead mix different responses, utilising different pedagogy during teaching (expose students to different types throughout a module).

Examples at the University of St Andrews:

- Honours Induction Day — Develop a performance on what they think sustainable development is (and then present 2 minute performance at end of day)
- Away days — allow for more freedom
- Extra-curricular — linking to formal curriculum to allow students to experience different pedagogies
- Different scales — small discussions, online voting to show expressed opinions, small interventions within a class

Pedagogy example: Outdoor learning

- Residential fieldtrip to Findhorn EcoVillage — walk, talk and experience (how to live and act in a sustainable way, how to generate discussions, explicitly engage with spirituality and moral issues)
- Residential fieldtrip to Orkney Isles with research in action — embedded within a module and students design research projects that includes ethics and risks approval
- Pizza making at the Doorstep Bakery community initiative — discussion about social enterprise, make dough, then discuss how to

develop a business, while pizzas baking learn about transition, inclusion and community thinking

- Fieldtrips in 1st, 2nd, 3rd years to Eden estuary, Biomass plant, BREEM outstanding new build, anaerobic digesters, golf course — walking field trips, speaking with various professionals/experts, looking at a different way what is already on campus
- Tutorials outside — get out of classroom

Module framing

By incorporating into core concepts of a module, allows for flexible pedagogical approaches:

- Design — theory of design, design 'something', field trip on design (example: students designed top to wear dyed with onion skins with flexible sizing); formal approach to learning by doing
- Material based learning — example: willow which allows you speak about social and cultural aspects, fieldtrip to make something, further making (allowed students to make something with their hands and tactilely engage with topics)
- Research design — theory, methods, design, project and presentation (example: Orkney); can use to think about future we want, how to do research that moves us toward sustainable development

Reflective exercises

- Reflective essays (on self, literature, fieldtrip, research) — describe how to do that, incorporating 'I' into an essay, need to have space in curriculum on why and how to do particular assessment
- Measuring past carbon footprint, planning reduction and measuring on-going carbon with reflective essay (1st year)

Other exercises

- Student led activities: projects
- Research / contributions to community: combines interests of students and what is required in community

Challenges

- Difficult to facilitate student led processes due to increasing audit culture, handbook deadlines
- Student concern for grades more than learning
- Expectation of certain activities and performances (managing expectations)
- Student feedback (ask for later assessment before graduation) — including follow-up assessments once more time has passed

- Lack of support — need to find that senior support who will have your back
- Time, energy, planning, resources — high degree of preparation needed
- Transformative learning can be painful — challenging people's paradigms is a difficult thing to do and need to offer students support

Solutions

- Start small — maybe not even assess, then apply learning and assess the following year
- Think through details with full assessment guidelines and timelines
- Get students on side — use student voice
- Participatory curriculum development — bring in notion of constructivist theory for students to guide direction
- Submit awards — get external recognition of new, good things
- Seek student feedback in different types of ways — use a focus group later (outside of exam period) when student have time and mental space to offer more constructive/positive feedback)

Conclusions

- Start small and be brave!
- Innovative pedagogies can re-instil a sense of joy to teachers as well as learners
- Link teaching, research, operations and management
- Innovative pedagogies allow learners to experience better LfS

Questions

BK: Does alternative pedagogy allow for LfS to move beyond traditional subject areas?

- RW: LfS should be incorporated throughout institution — example of incorporating sustainability into classics courses; biology students on a field trip can incorporate influences on biodiversity offering a practical examples with direct observation of human impacts; use to open up aspects across curriculum

AA: How to find ways to explore ways to fit it in across courses and modules on institutional level?

- RW: The challenge is the focus is always on curriculum, but a shift to pedagogy (teach about social enterprise in business) can then expand those opportunities.

AA: Do handbooks restrict ability to change and be flexible as you go? Personally uses a student led approach to specific module that incorporates different teaching methods, that is highly successful – and this module

	<p>doesn't have a handbook.</p> <ul style="list-style-type: none"> • RW: At St Andrews, we have to use handbooks so there is a need to think about how to work within system – to build your case talk about student led centres and use the right language. • SM: Accreditation and auditing focus is often used as an obstruction, but is not actually the case. People introduce these things despite lack of support, but then reviewed and finally get approval. Need to communicate across institution and need to have these innovative approaches. • RW: Often think about asking for forgiveness rather than permission. • DG: Change the way you look at curriculum — 'change the way of seeing, you change the way of what is seen'. 	
<p>5</p>	<p>Case study – University of Strathclyde VIP4SD Programme <i>Professor Steve Marshall & Dr Scott Strachan</i></p> <p>Presentation available to download</p> <p>Vertically Integrated Projects (VIP) are put together with students at different levels of course, so experience of different levels along with students from different disciplines</p> <p>University of Strathclyde adopted this programme from Georgia Tech, but Strathclyde applied it across wider disciplines, and now more recently focussing projects on sustainable development.</p> <p>VIP benefits:</p> <ul style="list-style-type: none"> • effective way of getting that impact over a period of time, without have to break it up and go back to the beginning every time • more integrated and coordinated approach to engaging undergraduates in impactful research (short, medium and long term) • offers a powerful mechanism for delivering sustainable development in higher education <p>VIP and the SDGs</p> <p>SDGs provide the framework and guiding principles for sustainability education, and have aligned the VIP programme with SDGs. It also aligns with the obligation within SDG Target 4.7 for learners to acquire knowledge of sustainable development, practical approaches to ESD.</p> <p>VIP4SD programme recognises undergraduate resource and captures their involvement early on in their academic careers</p> <ul style="list-style-type: none"> • Additional benefit is that employers are looking for people with these sustainability skills <p>The VIP4SD Programme is described as Research Based Education (RBE) — where students undertake research and enquiry, and are active participants with emphasis on research processes and problems. Benefits include:</p> <ul style="list-style-type: none"> • Decision-making involves the students in undertaking the research • Students become knowledge producers rather than knowledge 	

consumers

- Utilises strengths of staff (ie researchers versus teachers) to engage with undergraduate community

VIP4SD Approach

- Interdisciplinary approach — horizontal integration to engage students across the disciplines (horizontal approach)
- Involve students across different years (vertical approach)

These are the added dimensions to RBE — interdisciplinary and long term research groups in place at an undergraduate level.

- Build up a critical mass of students, with junior students following up senior students — constant throughput of students
- Responsibility of students to teach and learn from other students
- Level of expertise increases from first year to final year
- Scope for extension of research to post graduate level (better awareness of PhD research requirements)

There is even opportunity for publishing this research, spinning into social enterprise or turning into commercial enterprises

It is critically important to use an interdisciplinary approach when aligning curriculum with SDGs.

VIP is a mechanism to deliver RBE and embed RBE in the undergraduate curriculum as well as embed ESD in the institution – refers to as RBESD.

Future Plans

This year we are developing an online course open to all students — focussed on 1st and 2nd year — to get a better appreciation and understanding of the SDGs.

Staff are currently taking a lot of time to provide more awareness and information about SDGs.

VIP provides the mean for embedding RBESD into the curricula.

Example

SS is particularly focussed on SDG7 — Clean and affordable energy for all

To get new entrants engaged — propose a working problem (1.1 billion people live without access to electricity) as a way to inspire students and get them interested in area.

Have a VIP team linked with an outreach arm — to highlight impact of what can be delivered (Support the Gambian Solar Project — take students to site to install in remote areas and directly experience how people live and purpose for research).

Challenging students to come up with real world problems (lights in classrooms and health clinics).

- Provides first-hand experience of how solutions can improve quality of life (looking at broader context outside of engineering context)

Summary

VIP4SD is highly successful at producing a quality student experience, research and impact (including the VIPer Pit that distributed funding based on team pitches).

Also have a VIP for Sustainable Development Conference 2018/19

- This has now led to other conferences — at local level (Strathclyde), then Regional (Europe level) and then at Global Conference.

Main challenges

- Academic regulations
- Changes required to existing curriculum
- Assignment of academic credits
- Staff engagement and resource
- Student recruitment
- Assessment and supervision

Unexpected project outcomes:

- First time publishing in an education journal rather than science/technical journal
- Timing worked and continues to have top level support as it was looking for innovative initiative — and Principal now takes part in Student Conference

If anyone is interested in partnership or learning more about the programme, contact SS and SM.

Resource recommendations

- [Sustainable Development Solutions Network](#) (SDG Academy)
- [Getting Started with SDGs at University](#) from Monash University

Questions

AA: Is this incorporated into the curriculum?

- SS: Yes, students get credits for the course. Ways to embed into curriculum with minimal description included looking for container classes, such as modules that already exist and could be added onto learning outcomes for VIP and offer cross competencies with modules.
- SM: Excellent source for PhD research.

AA: Does it work as an elective?

- SS: It can — but difficulties due to different elective requirements across different years and disciplines. Suggestion is to have as electives all the way through or within container classes (project based classes), then as seniors select as individual projects.
- SM: PhD students can help run VIP project itself offering greater flexibility and shared resource burden with lecturers.

	<p>AA: How is it managed?</p> <ul style="list-style-type: none"> • SS: Overhead is surprisingly low as we utilise PhD students as day-to-day line managers as it is usually their area of research. Lecturers offer technical and research information assistance. • SM: First year, management is intensive as building programme from scratch, but second year students are there from the year before — so students can bring them up to speed and as programme matures, management resource burdens lessen. 	
<p>6</p>	<p>Workshop – Examining alternative ESD teaching methods <i>Lauren La Rocca, Sustainability Engagement Project Officer, EAUC- Scotland</i></p> <p>Interactive workshop demonstrating Education for Sustainable Development through role play (exercise outline available as downloadable document)</p> <p>Scenario: A local community is holding a meeting to discuss views on a sustainable transport system – what will it look like, what is important, what do we need to think about.</p> <p>Task: Each attendee is randomly assigned a role</p> <p>Group Reflection: It is good that each person had individual role rather than have small groups or dedicated speakers as it improves participation. Once one started to act out role, participants found it was easier to get into and found it interesting to see the resulting dynamic. It was easy to personally identify aspects of the role that you could relate to and then use it to inform perspective.</p> <p>Role play as a pedagogy is an easy model to incorporate into different courses. Role play can be an effective introductory activity where the focus can be on discussing empathy and understanding different perspectives to research, or role play can also be used as a conclusion to research with students who have a stronger background or knowledge base to allow for a more in-depth topical discussion.</p>	
<p>7</p>	<p>Discussion session</p> <p>What do you do or would you like to do to encourage alternative pedagogy into your own teaching or at your institutions?</p> <ul style="list-style-type: none"> • AA: Already applies case studies in renewable management, but could utilise role play (planning committee consent meeting – authority, company, community roles). • DG: Get ideas from other places (participatory workshops, role play, etc). • MC: Involved in scoping study with the University of Edinburgh to look at how to work lecturers and teacher fellows to identify what sustainability means to their field/teaching practice and now thinking about exploring pedagogy and bringing discussion to curriculum talks. 	

- SH: Use outdoor learning to introduce sustainability issues (through student observation). Has many ideas on how to put something in front of someone to spark interest, but now need to identify where they go/build that information (in a more global context) even on an institutional level.
 - RW: Maybe next step is learning to know themselves better; inter/intrapersonal competencies
- AL: Trying to make change within college is challenging as students are there for shorter periods as is identifying how to add sustainability into courses without it seeming a waste of time — need to push college to get ESD in the curriculum
 - RW: Using real world learning to add impact/benefit
- SS: Produce roadmap on VIP4SD implementation guide (perhaps with consultation with other universities and colleges to discuss generic challenges and discussion) to help other institutions replicate programme, and even allow for inter-institution research and partnerships.

What is needed from the rest of the group to envisage that action?

- AA: Support in terms of scenarios for sustainability teaching (scenario for each SDG goal for teaching purposes); Develop a sustainability module across whole institution — would like an ESD TSN session on running interdisciplinary modules
- DG: More immediate need for action-oriented education to put sustainability in context and what it means for organisations (and how do we get this into a course)
- SM: More ideas on ways to make this fun for students; SM & SS can provide information on VIP and help to support/mentor, meet at one's institution with the right people to help garner buy-in
- CF: Identify what types of things piloted in class that went really well (example: field trip with associated activities as outlined in St Andrews example)
 - RW: NUS has good A to Z guides in different disciplines
 - LL: EAUC has developed and will be releasing ESD in curricula, starting with Economics and Computing, with plans to further expand as well as [College Education for ESD Workbooks](#)
 - RW: Target specific areas, engage with departments stating goal for 5 pilot case studies in 1 year — ask for volunteers to work with you and recognition for early participation
- SS: Future workshop to explore ESD competencies; Identify practical methods to engage students; Leverage funding opportunities — identify ways to collectively seek funding programmes

EAUC-S and LfSS to collect resources and put on Sustainability Exchange and on LfSS website

RW and SS to share recent publications

<p>8</p>	<p>Future TSN Planning</p> <p><i>Lauren La Rocca, Sustainability Engagement Project Officer, EAUC- Scotland</i></p> <ul style="list-style-type: none"> • Call for Co-convenor Mike Pretious is stepping down as convenor for the ESD TSN. Rehema White will be new Co-convenor. If you are interested in being a co-convenor, please contact llarocca@eauc.org.uk. ○ Future topics for TSN discussed included further investigation into pedagogy including reviewing competency framework assessments, how to develop and implement interdisciplinary modules, and a follow-up to the measuring sustainability in the curriculum session. 	
<p>9</p>	<p>AOCB</p> <p><i>Rehema White, Academic, University of St Andrews</i></p> <ul style="list-style-type: none"> • Learning for Sustainability Scotland offers great resources and events <ul style="list-style-type: none"> ○ Storytelling for Sustainability – a practical workshop on 19th June at 10.30am-3pm in Edinburgh 	
<p>10</p>	<p>Next meeting</p> <p>Please email any suggestions for topics or speakers at our next meeting to llarocca@eauc.org.uk.</p>	
<p>11</p>	<p>THANKS AND CLOSE</p> <p><i>Rehema White, Academic, University of St Andrews</i></p>	

Minutes prepared by Lauren La Rocca, EAUC-Scotland Sustainability Engagement Project Officer,
20/05/2019