

Sustainability Symposium 2023: Top-down or bottom-up? How do we ensure all our graduates become sustainable citizens?

29-30 March 2023, Virtual

Session abstracts

29 March 2023

Keynote session, 12:35 – 13:20, [Zoom link 1](#)

Sustainability Education- a pedagogy of hope for global social justice

Professor Douglas Bourn, University College London

Sustainability education needs to be accompanied with a pedagogical approach that engenders a sense of hope. Under the leadership of international bodies such as UNESCO, education for sustainable development has been promoted as an essential component of a transformative approach to learning. Influenced by the thinking of the Brazilian educationalist Paulo Freire and recent debates on the usage of the term ecopedagogy, the presentation will draw from initiatives being undertaken at University College London to outline a distinctive educational approach that encourages a sense of optimism, and that change is possible in addressing today's global challenges.

Parallel Session 1.1 – Oral Presentations, 13:25 – 14:25, [Zoom link 1](#)

Session 1.1a

Pedagogies and assessment of C21 competences for sustainable futures

Claire Crichton-allen, University of Strathclyde

HE requires urgent transformation if it is to fulfil its potential to meet the current and emerging challenges facing humanity and the planet. Education for sustainable development (ESD) requires transformative, critical and emancipatory pedagogies. Existing HE structures don't readily support such approaches with hierarchical governance, siloed disciplines, transmissible pedagogies, and faculty-specific arranged learning spaces. This session will explore the limitations in current practice, with particular reference to the operationalisation of ESD competencies and assessment of their impact. It will position the need for a teaching and learning framework to support HE institutions to adapt and embed ESD in their curricula and the re-orientation of teaching and learning practices towards a more competency-based approach.

Session 1.1b

Top-down, middle out and bottom up: Our participatory and systemic approach to sustainable curriculum design at UAL

Nina Stevenson, Shibboleth Shechter and Laura Knight, University of the Arts London

This presentation will discuss our participatory and systemic approach to curriculum design at University of the Arts London. Our incremental framework works with staff and students as partners. Part of an ambitious Climate Action Plan, the framework is developing, testing and embedding meaningful change and contributing to climate, social and racial justice by supporting discipline-specific contextualisation across the six colleges of the university. It

aims to ensure that all UAL graduates develop sustainability competencies and ethical practices through the decarbonisation and decolonisation of the curriculum.

Session 1.1c

Embedding ESD across the university curriculum

Dr Aaron Cooper, University of Reading

The session will discuss the importance of embedding ESD across the university curriculum. In order to do this effectively it is necessary to set out an approach that integrates university-level mechanisms such as the Curriculum Framework and ongoing Programme Review Project. This central approach helps to highlight the way that ESD intersects with other strategic priorities such as employability (skills development/real-world application), and authentic assessment. It is also important to balance this with support for change instigated from the bottom up, and we will explore how the University of Reading achieves that balance; creating ESD objectives, designing guidance and adapting criteria from teaching and learning funding schemes.

Parallel Session 1.2 – Oral Presentations, 13:25 – 14:25, Zoom link 2

Session 1.2a

Barriers to embedding Education for Sustainable Development in the curriculum

Dr Alison Calvert, Dr Kieran Higgins, Alysha Thompson, Queen's University Belfast and Tracy Galvin, Glasgow Caledonian University

It is well recognised that equipping our graduates to tackle global sustainability problems is one of the biggest challenges facing higher education (HE). Whilst embedding the hallmarks of ESD into the curriculum (co-creation, transformative pedagogy, active learning, and authentic assessment), the presenters faced many challenges - local, institutional, and systemic. Here they will share their personal experience of reconciling the necessity of ESD against the realities of modern HE practice, offering forewarning to new ESD practitioners and guidance to existing ESD practitioners. The presenters also welcome the perspective of tackling barriers to ESD from all those present at the symposium.

Session 1.2b

Sustainability Champions and the student view of climate action: Co-creating curriculum re-development

Dr Emma Heron and Lukeman Iddrisu, Sheffield Hallam University

This presentation will share with delegates a pilot run at Sheffield Hallam University employing students as Sustainability Champions, offering a co-creative opportunity to dig deep into the student view about sustainability in the taught curriculum. The presentation will not only share the wider context around sustainability and the higher education sector but also offers an inside view of a co-creation pilot based on sustainability as well as the findings of the research into what current students think about sustainability and what this would look like in a university curriculum.

Session 1.2c

Enhancing Education for Sustainable Development at HE, primary and secondary school levels: The development of experiential educational game design and play with HE students

Dr Theresa Mercer, University of Lincoln

This project develops an innovative experiential life-cycle approach to ESD whereby HE Geography students become co-producers of climate knowledge and action through creating, playing and delivering games to primary and secondary school pupils. These games are related to sustainable lifestyle choices and climate change impacts. In essence, the students

become the teachers. This approach was also taken to help support teacher capacity and knowledge on sustainability and climate change issues.

Parallel Session 1.3 – Oral Presentations, 13:25 – 14:25, Zoom link 3

Session 1.3a

Strathclyde Climate Education Kick-Off: StrathCEKO

Dr Scott Strachan, University of Strathclyde

The Strathclyde Climate Education Kick-Off (StrathCEKO) encourages participants to take a systems thinking approach to understanding climate change and what effective climate local and global action looks like. It demonstrates how universities can engage effectively with non-government organisations (NGOs) to capitalise on their expertise, resource and focus to deliver academically robust and highly engaging provisions that address well-acknowledged barriers to implementing and mainstreaming climate education, such as lack of staff resource and widespread climate knowledge. It achieves this through a peer-to-peer, multiplier model that quickly scales-up Climate Education both inside the university and across the local community through student and staff outreach.

Session 1.3b

Social and environmental justice for a sustainable future

Dr Katja Hallenberg, Canterbury Christ Church University

In October 2022, Canterbury Christ Church University invited staff, students and the wider community to explore the connections between environmental and social justice, to promote inclusive learning environments and celebrate the contribution of diverse voices to building a sustainable future for all. The presentation discusses the experiences of an interdisciplinary and interdepartmental organising committee in embracing the inherent 'messy complexity' of both the topic itself and the practical delivery of the conference. By sharing the triumphs, challenges and 'lessons learned' we hope to encourage others to explore collaborative and innovative ways to promote environmental and social justice.

Session 1.3c

Head, heart and hand: Wicked problems in interdisciplinary modules

Elaine Brown, Uwe Richter and Victoria Tait, Anglia Ruskin University

Ruskin Modules are interdisciplinary, breadth modules at Anglia Ruskin University (ARU). Ruskin Modules are framed by the United Nations Sustainable Development Goals (SDGs), focused on a wicked problem and compulsory for students at their study Level 5. In these modules students from different courses collaborate to create new ways to see and act on these challenges. We will outline the principles of Ruskin Modules and explain the rationale for focus on wicked problems. Two Module Leaders will share their experiences of interdisciplinary approaches to wicked problems, the challenges and what worked.

Parallel Session 2.1 – Lightning Talks, 14:40 – 15:45, Zoom link 1

Session 2.1a

Social justice and the judiciary in Hong Kong: An assessment of the importance of higher education in Hong Kong for the practice and incorporation of modern social justice approaches into the practice of law in the Hong Kong Special Administrative Region

Noble Lo, The Hong Kong Polytechnic University

The session will assess how the traditional legal educational route provided for by higher education providers in Hong Kong may be little suited to providing a judiciary and legal profession which values and helps to promote social justice. This may be by design, with a focus on black-letter legal methodology remaining prominent, to the detriment of the advancement of alternative challenger jurisprudential approaches. In practice, this results in

the courts of Hong Kong insufficiently acknowledging social justice in the way in which some of their common law counterparts around the world have with associated public order and social risks.

Session 2.1b

Improving sustainability in healthcare: A medical student view on education of inhaler use

Lillie Henning, University of Nottingham

The delivery of healthcare has a significant impact on the environment. Inhalers (widely prescribed for respiratory conditions like asthma and COPD) are responsible for 3.5% of the NHS's total carbon footprint. In the UK, 70% of inhalers are pressurised meter-dose-inhalers, which generate huge amounts of waste and contain propellant gases responsible for global warming. Dry powder inhalers have up to 27kg less CO₂e per inhaler, yet are not sufficiently utilised by NHS prescribers. This session will examine the extent to which altering the teaching of inhalers could change current prescribing trends and improve sustainability.

Session 2.1c

The benefits and key skills gained from working with charities in a Business degree

Patricia Perlman-Dee, University of Manchester

This lightning talk will inspire you and make you realise that we can all give back through our teaching in higher education. The talk will share the details of the Not-for-profit consultancy projects conducted in the Fulltime MBA programme at the University of Manchester. It will also share the results of a survey of key skills learnt by students. Working with charities is easy to implement, particularly considering how much can be gained by all parties. The talk will assist you in teaching your students beyond the classroom and make a real difference to people's life.

Session 2.1e

Design sprints as a collaborative pedagogy for sustainability

Dr Jenny Davidson and Dr Lucy Hatt, Newcastle University

As part of the integration of sustainability into our Exec MBA we have used Design Sprints as a collaborative pedagogy to deepen our learners' understanding of sustainability and support partner organisations in addressing their material sustainability issues.

Session 2.1f

Curriculum co-creation for embedding UNSDGs and climate framework

Dr Homeira Shayesteh, Dr Christophe Viavattene and Naomi House, Middlesex University

This session aims to share our journey of embedding UNSDGs into teaching and curriculum at Middlesex University and engage with the audience about their experiences in this regard. We will discuss how embedding UNSDGs as an institutional priority can be translated into teaching and learning. The core impact of the project is to provide a body of evidence, which can support others to adopt this approach. This evidence base will form the basis of a revised teaching and learning framework that embeds the SDGs in a meaningful way into curricula.

Parallel Session 3.1 – Oral Presentations, 16:00 – 17:00, Zoom link 1

Session 3.1a

Taking a wholistic approach to sustainability

Ashley Wheaton, University College of Estate Management

The session will provide insights into UCEM's holistic approach to sustainability, looking at its ambitions to become sustainability leaders in both HE and industry through its adoption of a wide definition of sustainability, and an implementation plan across five key institutional dimensions: leadership and governance; what we teach; the way we teach; how we operate, and who we influence.

Session 3.1b

Embedding ESD into the UK Film and TV curriculum

Paul Wallis, Nottingham Trent University

This session will outline working with BAFTA ALBERT to introduce Sustainability Training to Screen Arts producers of the future. How a unique partnership between the UK Film and TV industry and a small group of higher education lecturers, has evolved since 2018 to now teach and influence the sustainable practices of undergraduate and postgraduate students studying Screen Arts subject areas in 37 higher education institutions across the UK. How in return, emerging pedagogic practices from HE are helping guide and shape how industry training experiences might benefit from hy-flex and blended active learning tools and resources.

Session 3.1c

Civic collaboration for “Sustainability Skills” and “Green Jobs”: making ESD relatable

Dr Andrew Reeves, De Montfort University, Lexie Jones, Change Agents UK, Charlotte Bonner, Education and Training Foundation and Sandra Lee, University of Leicester

This provocative talk will examine the potential alignment of Education for Sustainable Development (ESD) with agendas of employability and civic engagement and will highlight an apparent engagement gap with employers' priorities and students' workplace skills. Sharing findings from a recent stakeholder engagement project in Leicester and Leicestershire, the talk will clarify how concepts such as 'Green Jobs' can be defined and applied in diverse professional settings. We will put forward potential approaches to close the employer engagement gap and enhance students' workplace readiness, including closer university-employer educational partnerships and making professional roles addressing sustainability more relatable for employers and students through engaging case studies.

Parallel Session 3.2 – Oral Presentations, 16:00 – 17:00, Zoom link 2

Session 3.2a

Embedding SDGs in Executive Education

Dr Jenny Davidson, Newcastle University Business School

Newcastle University Business School has partnered with the consultancy, NETpositive Futures, to develop responsible leaders through the design and delivery of our new part-time Executive MBA (EMBA) programme. The 2-year pilot project explores moral reflectivity, partnering and scholarly practice in education for sustainability. Our programme design brings together pedagogy, technology and knowledge to enable learners to explore the Sustainable Development Goals (SDGs) in a personal, professional and academic context throughout the duration of the programme.

Session 3.2c

Developing a competency-based approach to facilitate teaching and learning of antimicrobial stewardship as part of environmental sustainability in higher education

Dr Antonella Tonna, Robert Gordon University

The environmental impact of the inappropriate use of antimicrobials and antimicrobial resistance (AMR) is recognised by global organisations such as the World Health Organisation and the European Union. Antimicrobial stewardship (AMS) is one strategy to promote appropriate use of antimicrobials to minimise AMR and is a priority for the NHS to ensure sustainable prescribing. To support this, national consensus-based competencies for teaching AMS to undergraduate healthcare professionals in the UK were launched in 2018. This presentation aims to describe our approach to tailor these AMS competencies to enable the development of a UK-wide competency framework specifically for student pharmacists.

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Keynote session, 09:05 – 09:50, Zoom link 1

Reaching out: Care and teaching sustainability, sustainably

Dr Jennifer O'Brien, University of Manchester

Parallel Session 4.1 – Oral Presentations, 09:55 – 10:55, Zoom link 1

Session 4.1a

Engaging first year Biology students with the SDGs

Professor Heather McQueen, Dr Elise Darmon, Hannah Alderdice, Nancy Williams-King and Seol Dobson-Allam, University of Edinburgh

This session will show how Biology students were familiarised and engaged with the sustainable development goals throughout their first semester of higher education. Our presentation team will include three first year undergraduate students who will provide the student perspective of the initiative. We will also share data demonstrating positive student attitude towards this approach, and will showcase creative and entertaining student work that links the sustainable developmental goals to the study discipline.

Session 4.1b

Creating a Teaching Resources for Sustainability platform

Dr Alicia Gonzalez Buelga, University of Bristol, Irina Lazar, University College London and Dorottya Cserzo, Cardiff University

In this session we will report and discuss the findings of a series of conversations that took place during two in-person workshops, held at a university in the UK during spring 2022. The meetings gathered together a group of Engineering educators, giving them space to share experiences on their current practice when teaching about sustainability and also when embedding sustainability into the Engineering curriculum. The initial driver for the workshops was to discuss the feasibility of setting up of an online platform for sharing resources on teaching, assessment and other teaching and learning materials all relating to sustainability issues in an Engineering education context.

Session 4.1c

Insights and practice on embedding sustainability in Engineering education

Professor Simon Philbin, London South Bank University

The presentation will provide insights and lessons learned from a recent initiative in the School of Engineering at LSBU to embed sustainability and wider research impact in Engineering education for MSc and final year MEng courses. This was part of the redesign of an existing module, including creation of new lecture material and an accompanying tutorial session, combined with a revised module assessment framework (formative and summative assessment). The presentation will highlight the approach taken to redesign the module to include research impact, sustainability and the SDGs as well as related concepts such as the triple bottom line and the circular economy.

Parallel Session 4.2 – Oral Presentations, 09:55 – 10:55, Zoom link 2

Session 4.2a

Chester Youth CAN: Bridging learning for sustainability and schools outreach through a youth-led climate action conference

Dr Rebecca Collins, Tamara Hunt and Jade Cox, University of Chester

Chester Youth CAN formed in April 2022 as a group of 12 diverse young adults (undergraduates and apprentices) tasked with designing and hosting a youth climate

conference for schools across Cheshire and North Wales. This talk will articulate the practical challenges of working across and around the competing timescales of funders, universities, schools and regional employers when creating interdisciplinary and inclusive sustainability project opportunities for students. We will reflect particularly on the challenge of creating sustained, consistent, cumulative and therefore meaningful project opportunities for students in the context of the rigidities of the academic year and short-term, intermittent funding opportunities.

Session 4.2b

From the inside out: Orienting the world of work to the work of the world (Porritt, 2012)

Cathy d'Abreu and Dr Karen Cripps, Oxford Brookes University

Employability, in itself, is not a holy grail, but it provides a vital opportunity to empower graduates with sustainability 'thinking, being and doing' for real-world impact within their future employment fields. This session will share learning from a multidisciplinary career development masterclass, designed through a sustainability lens, drawing on the UNESCO Education for Sustainable Development competencies (2017), the SOAR (Self, Opportunity, Aspirations, Results) employability framework (Kumar, 2021) and the Sustainability Mindset Principles (Rimanoczy, 2021). It will offer attendees approaches, frameworks and activities to empower graduates from any discipline, to connect their 'inner' selves with the outer 'work of the world' (Porritt, 2012).

Session 4.2c

Towards a sustainable university: Assess the effectiveness of www.susthingsout.com for embedding culture of sustainability within and beyond the institution

Katy Boom, Dr Sian Evans, Dr Heather Barrett, Heather Sykes and Joe Toft, University of Worcester

We will be inviting participants to assess the effectiveness of www.susthingsout.com, a student co-created digital magazine for embedding sustainability skills and a culture of sustainability within the University of Worcester and beyond the institution. We welcome commentary on identifying potential methods to drive forward greater discourse and engagement with sustainability across students, staff, practitioners, and the wider community. Attendees will be asked for suggestions and ideas on how to increase readership and ownership. This will build on recent student focus groups, providing valuable insights from the perspective of experts in higher education.

Parallel Session 5.1 – Workshop, 11:10 – 11:50, Zoom link 1

Session 5.1

Sinatra, Netflix and the Never-ending Story

Anna Fitzpatrick and Carole Morrison, University of the Arts London

In this short workshop participants will explore what Sinatra, Netflix, and the Never-Ending Story have to do with decolonising the curriculum at London College of Fashion, UAL. In the workshop there will be opportunity to explore some myths around decolonising as well as think about key concepts and consider how they relate to sustainability, climate, racial and social justice. This workshop has been designed and delivered by Academic Enhancement and Social Purpose teams and has been developed with partners across LCF including the Centre for Sustainable Fashion.

Parallel Session 5.2 – Workshop, 11:10 – 11:50, Zoom link 2

Session 5.2

Sustainable Institutions Project: Exploring strategic approaches to sustainability

Dr Iain Cross, London School of Hygiene and Tropical Medicine and Dr Alina Congreve, Independent Researcher

The Sustainable Institutions Project is a Collaborative Development Fund Advance HE project, and we are seeking your input. Universities have been acting on sustainability for over 30 years, but action is often restricted to individual programmes or departments. Some universities are taking steps towards a more strategic approach to embedding sustainability across whole organisations. We will share our initial findings from a systematic review of institutional sustainability initiatives, then invite participants to share their own examples. We will explore how top-down and bottom-up approaches can meet in the middle, and welcome all to share their experiences with us.

Parallel Session 5.3 – Workshop, 11:10 – 11:50, Zoom link 3

Session 5.3

Enabling ESD through academic quality processes: What works in what context?

Dr Andrew Reeves, De Montfort University

This session will address the challenge of embedding Education for Sustainable Development (ESD) across the whole taught curriculum using academic quality processes as a driver for engagement. Such processes include programme (re)accreditations, module reviews, curriculum transformation and student co-design and feedback. Interim conclusions will be shared from an ongoing UK-wide collaborative project to develop guidance on how such processes can be effectively used to address ESD in a range of institutional contexts. Participants will leave with insight into the key issues to consider and specific examples of effective wording and guidance used. Participant feedback will feed into the final project findings.

Parallel Session 6.1 – Oral presentations, 12:05 – 13:05, Zoom link 1

Session 6.1b

Exploring PRME SIP reports issued by UK Business Schools from 2020 to 2022

Katerina Kosta, Oxford Brookes University

How do UK Business Schools embed sustainability and social responsibility in their curricula? This session will explore the 2020-22 reports issued by UK Business Schools as part of their commitment to the United Nations Principles of Responsible Management Education (PRME). PRME signatories must report biannually how they incorporate sustainability in their 'academic activities, curricula, and organisational practices' (PRME, 2023). Content analysis through NVivo 12 will identify prominent themes and best practices in embedding sustainability in Business School curricula.

Session 6.1c

Cultivating aspiring minds

Dr Indrani Lahiri, Jayanta Ray and Deborah Fakehinde, De Montfort University

Cultivating Aspiring Minds (CAM) is a strategic initiative that has three strands: (1) Resilience; (2) Community; and (3) Collaboration. In this talk we will present how we have mapped institutional priorities against the UN SDGs and translated them into actions through civic engagement, enterprise development, and charitable initiatives.

Session 6.1d

Scaling up and embedding Carbon Literacy training in Manchester Metropolitan University

Dr Rachel Dunk, Cormac Lawler, Jane Mörk and Liam Bluer, Manchester Metropolitan University

In response to the climate crisis, Manchester Metropolitan University has, since 2015, been delivering an innovative peer-to-peer Carbon Literacy for Staff and Students training programme, including training students to be Carbon Literacy (CL) trainers, developing employability and sustainability skills. From this academic year, Manchester Met has taken

the strategic decision to embed CL training across the curriculum, to every student, by 2026. This session will share experiences of embedding CL training, and compare training evaluation data before and since embedding training. It will also reflect on experiences of rolling out training at such scale, and developing a toolkit for the wider sector.

Parallel Session 6.2 – Oral presentations, 12:05 – 13:05, Zoom link 2

Session 6.2b

Using university campuses as living labs to train sustainable citizens

Professor Hong Yang, University of Reading

Education for Sustainable Development (ESD) has been increasingly recognised for all subjects, and sustainable citizenship has been widely required by employers. In this project, a bottom-up approach was conducted to train students to be sustainable citizens, using our university campus as a living laboratory. The green curriculum was embedded in six teaching modules. Students used portable sensors to measure CO₂ on campus. Based on the team-collected CO₂ data, students developed an action plan to reduce carbon emissions from campus. Our research indicates that a bottom-up ESD approach can be an effective way to train sustainable citizens.

Session 6.2c

Sustainable communities and HE: The 3Cs approach to co-creation and sustainability education

Dr Lory Barile and Bo Kelestyn, University of Warwick

Using design thinking as an approach to problem solving, this presentation will introduce a framework for engaging diverse groups of students and staff to work together to solve a real-life sustainability challenge. The presentation will offer an opportunity to explore how we co-develop more holistic higher education approaches to sustainability, linking the teaching and learning provision (curriculum), to values and ways of working and studying on campus, and the local community -i.e., the 3Cs approach to sustainability.