QUEEN'S BUSINESS SCHOOL

PRME Chapter UK & Ireland Annual Conference 2025

Book of Extended Abstracts

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PRME Principles for Responsible Management Education
CHAPTER UK & IRELAND

ABOUT THE CONFERENCE

On 18 & 19 June 2025, Queen's Business School was delighted to host the 2025 Principles for Responsible Management Education (PRME) UK & Ireland Chapter Conference under the theme of '**Partnering for Progress: Enhancing Collaboration, Building Communities, & Navigating Conflict to Accelerate Agenda 2030**.' The theme reflected the pivotal role business schools play within society, locally, nationally, and globally. As emphasised by the fifth Principle of PRME (Partner) and UN SDG 17: Partnerships for the Goals, advancing the 2030 Agenda for Sustainable Development and achieving environmental, social, and economic sustainability requires collegiality, collaboration, and creativity.

Presenters were invited to submit either a standard or extended abstract. The latter have been collated into this Book of Extended Abstracts. In addition to highlighting innovative research, scholarship, and teaching practices, it serves to demonstrate the breadth and depth of Responsible Management Education. We hope you find the content informative, engaging, and–not least–inspiring.

About PRME

PRME is a UN-supported initiative established in 2007 that aims to raise the profile of ethics, responsibility, and sustainability in business and management education through Seven Principles (below) focused on serving society and safeguarding our planet. PRME's mission is to transform management education and develop the responsible decision-makers of tomorrow to advance sustainable development.

PRME Chapter UK & Ireland (UK & I) is a member-based organisation that serves as a focal point of coordination and communication for the UK and Ireland based signatories of PRME. The Chapter works with higher education institutions and related bodies to support the integration of PRME and the advancement of the UN SDGs. For more information about the Chapter, please visit www.unprme.org.uk



ABOUT QUEEN'S BUSINESS SCHOOL

Queen's Business School (QBS) at **Queen's University Belfast** offers world-class undergraduate, postgraduate, and executive education. The School has six core academic departments and one institute: the Departments of Accounting; Economics; Finance; International Business, Entrepreneurship, and Marketing (IBEM); Information Technology, Analytics, and Operations (ITAO); Organisation, Work, and Leadership (OWL); and the William J. Clinton Leadership Institute.

QBS is accredited by EQUIS, AACSB, AMBA, and the Small Business Charter, holds an Athena SWAN Bronze Award, and has served as a PRME Champion institution since 2020. In addition, as a member of the Global Business School Network (GBSN), the School is connected through strategic partnerships across the world. Our MBA programme was recently ranked in the top 40 globally by Corporate Knights as part of its 2023 Better World MBA ranking which assesses the extent to which business schools integrate sustainability-related content within their curriculum.

For more information about our work related to PRME, please see our 2024 PRME Sharing Information on Progress Report.

Queen's Business School PRME UK & Ireland Conference Organising Committee

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Building a UK & Ireland Sustainability Champions Community of Practice (CoP)

Dr Karen Neville (University College Cork) & Dr Rachel Welton (Nottingham Trent University)

The United Nations' Agenda 2030 underscores the need for global partnerships and collaborative efforts to achieve the Sustainable Development Goals (SDGs). As businesses increasingly recognize the necessity of sustainability-driven strategies, business education must evolve to integrate responsible management principles effectively. Within this realm, fostering a strong community of practice among educators can serve as a powerful catalyst for advancing responsible management education, sustainability, and cross-institutional cooperation. Collaboration among business school educators offers opportunities to share resources, develop joint initiatives, and enhance sustainability integration in business curricula, thus preparing future leaders to address complex global challenges.

This study explores the potential for collaboration among business school educators in the UK and Ireland to create a sustainable and effective network that promotes shared learning, collective problem-solving, and continuous improvement in responsible management education. The research investigates how educators can work together through structured initiatives and informal networking to overcome institutional silos, develop innovative teaching methodologies, and foster interdisciplinary collaborations. By examining survey data collected from PRME Leads of various business schools, the study highlights the challenges, opportunities, and preferred mechanisms for developing a long-term, sustainable network for knowledge exchange and professional development.

Methodology

A structured survey was distributed among representatives from PRME UKI business schools to gauge interest in forming a collaborative community, identify preferred engagement methods, and explore avenues for resource-sharing and joint initiatives. The survey aimed to capture both quantitative and qualitative insights, ensuring a comprehensive understanding of educators' perspectives.

Key elements of the survey included:

- Interest in forming a UKI PRME CoP to facilitate collaboration and shared learning.
- Preferences for meeting frequency and format, including in-person and virtual engagements.
- Willingness to participate in 'Open to All' networking events involving faculty across different institutions.
- Interest in sharing teaching materials, case studies, and pedagogical tools.
- Perceived challenges and barriers to collaboration, alongside potential strategies to overcome them.

The survey comprised a mix of closed and open-ended questions to allow for structured analysis while capturing nuanced perspectives on fostering collaboration. The qualitative responses provided deeper insights into specific needs, concerns, and aspirations related to the formation of a community of practice among business school educators.

Findings

Analysis of the survey responses reveals a strong interest in establishing a structured yet flexible community of practice among business school educators. Key findings include:

- **Widespread Support for Collaboration**: Over 80% of respondents expressed interest in participating in regular UKI PRME Chapter online meetings, while 75% indicated a willingness to engage in 'Open to All' meetings with faculty from different institutions. This demonstrates a strong appetite for inter-institutional collaboration in business education.
- **Preferred Engagement Frequency**: The majority of respondents (65%) favoured biannual or termly meetings for broader networking events, while monthly or semester-based meetings were preferred for local representatives. This suggests a need for structured interactions that balance accessibility with meaningful engagement.
- **Resource-Sharing and Collaboration**: More than 70% of respondents were willing to share teaching materials, case studies, and toolkits with their peers. Specific contributions mentioned include AI tools for sustainability education, career storytelling resources, carbon literacy materials, and responsible foresight methodologies.
- **Collaboration Challenges and Opportunities**: Open-ended responses highlighted the need for a structured yet adaptable networking platform, regional impact zones, and collaborative research initiatives focused on SDGs. Many educators expressed interest in interdisciplinary collaboration and co-developing sustainability-focused curricula.
- **Barriers to Participation**: The most commonly cited barriers included lack of time, institutional bureaucracy, and misalignment of priorities among different schools. Educators emphasized the importance of low-administration, high-impact collaboration models to ensure sustained engagement.

Discussion

The survey results indicate a clear demand for a structured yet flexible network where educators can collaborate without excessive administrative burden. While enthusiasm for collaboration is high, practical concerns related to time constraints and institutional differences must be addressed to ensure sustainable engagement. Based on the findings, several key recommendations emerge for developing and maintaining an effective collaborative network:

1. **Creating an Interactive Online Platform**: Establishing a digital repository where members can share teaching materials, case studies, and best practices, ensuring accessibility and ease of collaboration. Such a platform could also facilitate asynchronous discussions, reducing the dependency on scheduled meetings.
2. **Developing a 'Buddying' System**: Pairing educators based on shared research and teaching interests to encourage smaller, focused collaborations. This approach fosters deeper engagement while allowing educators to work within their specific areas of expertise.
3. **Organizing Thematic Webinars and Workshops**: Facilitating knowledge exchange on sustainability integration, responsible management, and innovative pedagogical approaches. Webinars could focus on pressing issues such as business ethics, climate change, and digital transformation in responsible management education.

4. **Encouraging Cross-Institutional Research**: Supporting collaborative research projects that align with Agenda 2030 and the SDGs, leveraging shared expertise and institutional resources. This could include joint funding applications, multi-institutional studies, and knowledge dissemination efforts.
5. **Formalizing a Meeting Structure**: Establishing a regular meeting schedule, potentially aligning with existing networks such as PRME and other responsible management education initiatives. A well-structured approach ensures continuity while allowing for flexibility in participation.
6. **Developing Regional Impact Zones**: Given the geographical spread of institutions, regional sub-groups could enable localized collaboration while feeding into the larger network. This structure could facilitate in-person meetings, workshops, and applied research collaborations tailored to regional sustainability challenges.
7. **Institutional Support and Incentives**: Encouraging institutions to recognize and support educator participation in collaborative efforts through workload allocation, funding, and career development opportunities. Institutional endorsement can play a critical role in ensuring sustained engagement from faculty members.

Conclusion

This study highlights the potential for a structured yet adaptable community of practice among business school educators focused on responsible management education and sustainability. By fostering regular interaction, resource-sharing, and interdisciplinary collaboration, this initiative can significantly contribute to accelerating progress toward Agenda 2030. The findings underscore the importance of balancing structured engagement with flexibility to accommodate diverse institutional priorities and time constraints.

Future steps involve piloting the recommended strategies and evaluating their effectiveness in sustaining engagement and impact. Continuous feedback from educators will be essential in refining the network's structure and ensuring its long-term success. Additionally, aligning efforts with national and international sustainability-focused education initiatives will further enhance the reach and relevance of the collaboration.

Ultimately, the creation of a vibrant, resource-sharing, and innovation-driven educator network can play a pivotal role in equipping future business leaders with the knowledge, skills, and values necessary to drive sustainable transformation. Ensuring that business education remains at the forefront of responsible management practices will be key to addressing global sustainability challenges and advancing the SDGs in meaningful and impactful ways.

Author Bios

Dr Rachel Welton is International Director and Deputy Head of Undergraduate Studies at Nottingham Business School (NBS) and a Senior Fellow HEA. She is on the Principles of Responsible Management Education (PRME) UK and Ireland Chapter Steering Committee, Leads on the PRME UK & I Local Networks and Doctoral Colloquium. An active member of the PRME Champions group and a co-founder of Carbon Literacy Training for Business Schools, Rachel is currently involved in several pedagogic research projects in responsible management education, such as, carbon literacy training and coaching and mentoring for responsible management; the learning from these initiatives informs her teaching.

Dr Karen Neville is a Senior Lecturer in Business Information Systems (BIS) at University College Cork (UCC) and the PRME Lead for Cork University Business School. She is also the Founder and Managing Director of the Centre for Resilience and Business Continuity (CRBC) (CRBC.UCC.ie). A leader in decision support systems and resilience research, Dr Neville has secured over €14 million in research funding for UCC, with publications in top business and information systems journals, where she has also served as a guest editor and associate editor. Her excellence in teaching has been recognized with eight national teaching awards. Currently, she is a Work Package Lead for the Horizon Europe DYNAMO project (horizon-dynamo.eu), which integrates Business Continuity Management (BCM) and Cyber Threat Intelligence (CTI) to enhance situational awareness and decision support across all stages of the resilience cycle—mitigation, preparation, response, and recovery.

Building Bridges: A Collaborative Cross-Functional Mentorship Program for Female Business Students' Sustainable and Professional Development

Dr Evelyn Oginni & Dr Kate Han (University of Salford)

The intersection of gender equality, quality education, and sustainability presents both challenges and opportunities for female students in business schools. While women in business education bring diverse talents and perspectives, they often face barriers such as gender-based challenges (Ntshongwana, 2024) and limited access to professional networks (Flynn, Haynes, & Kilgour, 2017). These barriers hinder their ability to fully participate in and contribute to sustainable development.

This paper outlines an innovative mentorship program at Salford Business School designed to address these challenges by fostering a supportive community for female business students. The program leverages internal collaboration across university departments and external partnerships, including local charity shops, to promote professional development and sustainability awareness. By integrating mentorship, skills development, and hands-on sustainability experiences, the program aims to empower female students to become leaders in a sustainability-focused business environment.

The program is grounded in three key theoretical frameworks. First, Social Learning Theory (Bandura, 1977) emphasizes the importance of role models and observational learning in professional development. Second, the Gender-Responsive Mentoring Framework (Ragins, 2016) addresses the specific needs of women in business environments. Finally, the Theory of Planned Behavior (Ajzen, 1991) provides insights into how attitudes toward sustainability can be transformed into meaningful behavioral change. These frameworks guide the program's design and implementation, ensuring it aligns with the United Nations Sustainable Development Goals (SDGs), particularly Quality Education (SDG 4), Gender Equality (SDG 5), and Responsible Consumption and Production (SDG 12).

The program takes a collaborative, institution-wide approach, involving academic subject groups, administrative teams, technical support, student services, and The Centre for Sustainable Innovation (CSI). External partnerships with successful female business professionals, women's networks, alumni, local businesses, and charity shops further enhance the program's reach and impact. The involvement of charity shops is particularly significant, as these organizations align with the principles of sustainability and provide a practical way to demonstrate how sustainability impacts the real world. Through hands-on experience in charity shop operations, students engage with circular economy principles, social enterprise models, and sustainable business practices, fostering a deeper understanding of sustainability in action.

The program is structured around four key components:

- **Structured Mentoring**: One-on-one industry mentoring, monthly group sessions, networking events, and career development seminars.
- **Skills Development**: Training in leadership, professional communication, digital literacy, financial acumen, and sustainable business practices.

- **Professional Well-being**: Support for work-life balance, stress management, career resilience, and mental health.
- **Sustainability in Practice**: Hands-on experience through charity shop operations, circular economy workshops, social enterprise management, and impact measurement training.

At its core, this program is about building a community that supports female students' professional growth while promoting sustainable development. The partnership with local charity shops serves as a practical learning environment where students can engage directly with sustainability initiatives. This hands-on experience not only helps students understand sustainable practices but also fosters a sense of community ownership and responsibility. By working together in these settings, students, mentors, and community partners co-create solutions that align with the SDGs, leveraging diverse insights and perspectives.

The program also emphasizes inclusivity and equity, ensuring that the voices of female students—often underrepresented in business environments—are amplified. This aligns with the broader goal of community-building, which seeks to empower marginalized groups and ensure that the benefits of sustainable development are equitably distributed.

As this is an initial plan, several challenges are anticipated. Maintaining consistent engagement among participants will be a priority, and a hybrid delivery model using digital platforms is being considered to address this. Measuring long-term impact will also be a challenge, and longitudinal tracking systems are being explored as a potential solution. To accommodate diverse career goals, the program will use personalized matching processes, and flexible frameworks will help manage scaling and academic integration.

Recent research at Salford Business School highlights the importance of digital transformation and data-driven approaches in higher education. For example, Chen, Han, and Seager (2025) demonstrate how automating business processes can enhance organizational efficiency and productivity, which could be applied to streamline the mentorship program's operations. Additionally, Ubah-Nwoha, Chen, and Han (2025) investigate students' study behavior in the post-pandemic era, providing valuable insights into how digital tools can support engagement and learning in hybrid environments. These findings will inform the program's use of digital platforms to maintain consistent engagement and track participant progress.

Looking ahead, the program's future development will focus on expanding the mentor network, developing digital resources to support scalable delivery, and creating a robust alumni network to provide ongoing mentorship opportunities. Cross-institutional partnerships will be explored to share best practices and resources, while advanced impact measurement systems will be implemented to track outcomes. The charity shop partnership will be expanded to offer more hands-on sustainability experience, and a sustainable business incubator is being considered to support participants' entrepreneurial aspirations in the sustainability sector.

In conclusion, this mentorship program proposal demonstrates the potential of community-building to support female business students while advancing the SDGs. By integrating professional development with sustainability education, the program aims to create a

supportive community that empowers participants to thrive professionally and contribute to sustainable development. While this is still in the planning stages, the program offers a replicable model for other institutions aiming to enhance gender equality and sustainability in business education. Through its focus on inclusivity, equity, and community engagement, the program aligns with the conference theme of building communities for meaningful and lasting progress toward the SDGs.

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Author Bios

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Dr Oginni was the winner of the University of Salford's Three Minute Thesis (3MT) competition in 2020. Additionally, she contributed to the *SPARC 2021 - Against All Odds: Salford Postgraduate Annual Research Conference Book of Abstracts*. Outside of academia, Dr Oginni enjoys visiting Chapter One Books in Manchester for coffee and reading.

Kate Han

Dr Kate Han is a Lecturer at Salford Business School, where she extends her research to include Innovative Teaching and Learning, sustainability, and operational research. Her primary research interests focus on scheduling, ensemble learning, and transportation simulation and optimization. Dr Han specializes in applying metaheuristics and AI algorithms to solve complex, real-world optimization challenges. She has extensive experience working with data of different scales across various real-world projects, collaborating with stakeholders ranging from government authorities to industry partners. Her work mainly contributes to the simulation and optimization of multi-modal transportation networks research area.

Dr Han received her Ph.D. in Software Engineering from Queen's University Belfast in 2018. Her doctoral research focused on utilizing hyper-heuristics and reinforcement learning to address timetabling and scheduling problems. She has presented her research at leading AI conferences, including IEEE CEC, GECCO, Eurocast, and ACIIDS, and has published in prestigious journals

Developing Collaborative and Responsible Entrepreneurship Education Programmes: Sharing insights from the REsPoNSE Initiative

Prof. Colette Henry (Dundalk Institute of Technology, Ireland, & Griffith University, Australia), Dr Jennifer Fegan, & Dr Teresa O'Rourke (Dundalk Institute of Technology)

Introduction

As part of the 'entrepreneurial university' agenda (Klofsten et al., 2019) and to deliver on their 'third mission', higher education institutions (HEIs) are uniquely positioned to take on the role of entrepreneurial changemakers. However, if HEIs are serious about this role, they need to move beyond the provision of traditional and generic entrepreneurship education programmes towards the creation of novel responsible entrepreneurship models that motivate students to widen their thinking to address society's big problems, such as those articulated in the UN SDGs (Cai & Ahmad, 2023; EC, 2020).

Accordingly, responsible entrepreneurship education is emerging as an effective mechanism for creating the entrepreneurial changemakers of the future – a new category of socially and ethically responsible entrepreneurial graduates who can act as powerful catalysts, contributing positively to society while minimizing negative impacts on both people and planet (Henry et al., 2025). Such graduates might engage directly in responsible new venture creation as entrepreneurs or lead the responsibility agenda of an existing business or organisation, acting as responsibility/sustainability managers. Either way, they will effect significant positive change in the environment within which they operate.

Against this backdrop, this paper aims to share insights from the *REsPoNSE* initiative – an innovative responsible entrepreneurship education programme currently being developed by a collaborative academic partnership in the Republic of Ireland. Data gathered through the programme will be used to inform academic leaders and educators about the value of responsible educational programmes. The experiences of the team will be shared to illustrate how key implementation challenges were overcome by using a collaborative approach.

Background

In April 2024, the Higher Education Authority (HEA) in Ireland issued a call for proposals for its competitive Entrepreneurship Education Initiative (EEI). The call invited collaborative applications from Irish universities/HEIs under two strands: Entrepreneurship Initiatives (practical projects) and Student Entrepreneurship Programmes (educational projects). Funded projects would be delivered within an 18-month timeframe, and project leaders would be required to report periodically on progress. A total of €1.8 million was allocated to the EEI call. The call received 18 applications from 14 universities/HEIs and, following a rigorous assessment process by an independent international panel, five projects were funded.

Dundalk Institute of Technology (DkIT) were fortunate to receive €246,000 for their project *REsPoNSE* (Responsible Entrepreneurship and the Promotion of Novel Approaches to Sustainable Enterprise). *REsPoNSE* seeks to create the entrepreneurial changemakers of the future through a novel co-designed and co-delivered Master of Business Studies (MBS) in

Responsible Entrepreneurship. This will be a highly innovative project based on the fundamental principle of collaboration, where partners will share knowledge, pool resources and harness diverse expertise to tackle complex sustainability challenges. This project will "break all the rules" as it will be co-designed, co-validated, co-delivered, have no exams, and employ a hybrid delivery led from different locations. It will include industry mentoring and a "first-of-its-kind" credit-bearing Incubation module. The ground-breaking nature of the project (e.g., its intended deviation from the rigid structures of traditional programme formats) will require a leap of faith from the partner institutions as well as a commitment from their respective academic registry offices to buy-in to a new collaborative delivery model. This project, while much needed, will also be challenging to bring to fruition.

The RESPONSE Project

REsPoNSE targets individuals with a passion for responsible entrepreneurship and a degree in any discipline. This collaborative, cross-disciplinary project aims to create graduates who are '*responsible entrepreneurial changemakers*' interested in either creating new ventures that are responsible, sustainable and of benefit to society, or taking on a sustainability/ responsibility management role within an existing business to help industry deal with its responsibility challenges.

Through a unique collaborative partnership with five Irish academic institutions (DkIT, ATU, MTU, TUS and UCC), the project team will co-create and co-validate a responsible entrepreneurship programme that supports 36 students nationally. Each academic partner will provide diverse entrepreneurial knowledge and expertise that will be collated and harnessed to produce an exciting and novel entrepreneurial programme.

This highly applied programme comprises seven micro-credentials and two exit awards. The first exit award – a Postgraduate Certificate (30 credits) – will be available to students upon successful completion of three modules: *Entrepreneurial Competence*, *Responsible Entrepreneurship* and *Resourcing the Responsible Enterprise*. The second exit award – a Postgraduate Diploma (60 credits) – will require completion of an additional two modules: *Responsible Business Strategy* and *Industry Research Project*. The MBS in Responsible Entrepreneurship (90 credits) will be awarded on successful completion of an additional 30 credit module. Students may choose between *Incubation for Responsible New Venture Creation* or the *Industry Challenge Project*.

The programme is offered on a one-year full-time, fully funded basis and is scheduled to commence in September 2025. A two-day residential Induction/Kick-off session will launch the programme, offering learners the opportunity to meet the programme team and network with their peers. This immersive session will also introduce learners to the various academic supports available, give them an opportunity to discuss their career plans, and begin their responsible entrepreneurship journey. The residential will also provide an opportunity for the programme team to pool their knowledge, co-deliver material, and ultimately strengthen this collaborative endeavour.

The *REsPoNSE* programme will have additional innovative elements, including industry engagement and responsible career coaching. The programme will be offered through a blended hybrid delivery model, including synchronous/asynchronous online and on-campus block delivery requiring engagement with the teaching team on two days per week. Assessments will be "exam-less" but highly applied and will include student-industry projects; hybrid industry placements; simulation games; VR assessments; and self-reflective video diaries to allow a thoroughly immersive entrepreneurial experience.

This programme will adopt a highly inclusive "entrepreneurship for all" approach to its activities. Accordingly, the partnership will encourage applications from those individuals from varied socio-economic and educational backgrounds, marginalised communities, and under-represented groups, such as the disabled and neurodiverse, and those who historically have had limited access to higher education and entrepreneurship.

Research and Evaluation

A robust research and evaluation plan has been embedded into the project from the outset. Partners will collaborate throughout the programme to collect data on learner profiles, preferred teaching, learning and assessment styles, module feedback, learner career intentions (e.g., new venture creation vs industry orientation); completion numbers; business idea categories, and graduate destinations. These data will be gathered by means of preliminary application forms, learner surveys, learner, educator and industry focus groups, and mentoring feedback forms.

It is anticipated that REsPoNSE will impact positively on:

- *The target group*: Equipping students with practical skills for responsible entrepreneurship and sustainable enterprise for a career in a wide spectrum of industries, from start-ups, IT, food, engineering, arts and medical sectors to various government institutions and NGOs. Graduates will gain a valuable new mindset in responsible and entrepreneurial thinking to help change current industry attitudes and lead organisational responsibility agendas.
- *Industry*: Enabling a wide range of companies to employ graduates who will apply their unique skillset in responsible entrepreneurship and sustainable enterprise and offer creative and innovative solutions to sustainability challenges.
- *Partner institutions*: Extending the network of HEIs focused on entrepreneurship education and changing the way entrepreneurship is taught at masters' level; sharing good practices and enhancing teaching and learning content, pedagogies, and assessment approaches; enhancing collaboration between partners' research centres.
- *Entrepreneurial ecosystem*: By nurturing a cohort of graduates who are adept in innovative problem-solving and are committed to social and environmental responsibility, REsPoNSE supports the Irish entrepreneurial ecosystem, fosters cross-sector collaboration, and drives impactful solutions to pressing global challenges.

Conclusions

Collaboration is a critical component of the REsPoNSE initiative and occurs at multiple levels throughout the project. Collaboration takes place within academic teams at their respective institutions, across disciplines and faculties, between institutions, incubators, industry, relevant public bodies, and students. Collaborative activity is not confined to Ireland but extends to the partnership's institutional networks internationally. While (at the time of writing) the REsPoNSE initiative is still at the preparation stage, its impact is expected to be significant, enhancing current entrepreneurship education provision across the partnership, facilitating the exchange of experiences and knowledge amongst the team and, most importantly, creating the entrepreneurial changemakers of the future. REsPoNSE will create collaborative opportunities for staff and students to work together to overcome common challenges, expand their networks nationally and internationally, engage with industry, and gain new and enhanced entrepreneurial skills that focus on responsibility.

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Developing SDGs-driven Entrepreneurship Culture Across Ireland

Dr Lana Repar (University College Cork), Prof. Joe Bogue (University College Cork), Dr Breda O Dwyer (Munster Technological University), Dr Jennifer Fegan (Dundalk Institute of Technology), Brian Ogilvie (South East Technological University), Annmarie McHugh, Emer McKenna, Mary Kennedy, Amanda Kearns, Dr Maeve McArdle, & Elizabeth Murray (Dundalk Institute of Technology)

Introduction

Collaborative partnerships are crucial for advancing sustainability from theory to practice in entrepreneurship education, equipping future leaders with the skills to integrate SDGs into business. This innovative collaborative project "Developing SDGs-driven Entrepreneurship Culture Across Ireland" aims to bring a change in a culture through entrepreneurship education across Irish higher education institutions through two objectives:

- Embed SDGs into entrepreneurship education through effective tools for students and those staff delivering entrepreneurial education
- Build a national collaborative network focused on embedding the SDGs into entrepreneurship education

This is the first multi-partner SDGs-driven entrepreneurship education project across Ireland among six partner institutions: University College Cork, Munster Technological University, Trinity College Dublin, South East Technological University, Dundalk Institute of Technology and Dublin City University. The novel approach to entrepreneurial education being applied by our project uses the SDGs lens to re-imagine entrepreneurship education and embed sustainability formally into it. Currently, there is no such formalised and focused set of entrepreneurship education initiatives at the partner institutions, where entrepreneurship education is aligned with the SDGs, and is offered at all levels to students (e.g., secondary-level, undergraduate, postgraduate, executive education, adult continuing learning) and staff.

For this project, the partners define SDGs-driven entrepreneurship education as education that empowers participants to learn about, and embrace, sustainable entrepreneurship and demonstrate the role it can play in addressing societal, economic and environmental challenges, underpinned by the SDGs, as fundamental for the future of society. Such education focuses on emphasising the role of the SDGs in entrepreneurship, start-ups and intrapreneurship within existing businesses and encouraging students to consider how to embed the SDGs within the organisational culture and business strategies. The innovativeness of this project is in incorporating the educators' voice and real time experience in crafting initiatives delivered in a user-friendly format, scalable, available online and shared among partners. All partners are equally involved in shaping the project and use their competitive advantages and interest areas to collaboratively add to, and advance, SDGs-driven entrepreneurship education in Ireland. This assists in developing an SDGs-driven entrepreneurship culture across Ireland and through the partner institutions and the Entrepreneurship Ecosystem members this culture is nurtured, encouraged, awarded and shared, for students, staff and partners when they engage in entrepreneurship activities.

Background

While entrepreneurship education has undergone many changes, a relatively new area is sustainable entrepreneurship, with a focus on not just learning core business or economic concepts but also focusing on addressing social and environmental issues. There has been an increased interest in (i) learning and teaching entrepreneurship using a sustainability lens and (ii) the important link between entrepreneurship education and entrepreneurial behaviours. Entrepreneurship education has a central role to play in developing sustainable entrepreneurs who seek to address the SDGs. Sustainability has been identified as one of the principal drivers of progress and entrepreneurship is key to achieving the SDGs. Hence, this project embodies the Irish Government's Second National Strategy on Education for Sustainable Development (2022) that promotes and supports the development of the requisite skills, knowledge and attitudes that help everyone to act for a sustainable future and planet. It also aligns with the partner institutions' strong commitment to the SDGs and bridges the identified gap between current offerings in the entrepreneurship education space and the SDGs. The project initiatives enhance partners' capacity to provide tools and supports for SDGs-driven entrepreneurship education at the institutional level and significantly contribute to building a network of collaborative Irish universities committed to this cause with good practices, new approaches and research being shared among partners.

This collaborative project consists of five entrepreneurship education initiatives that represent a strong basis for developing an SDGs-driven entrepreneurship culture across the partner institutions.

Initiative 1: Short Courses for Students and Staff with accompanying Digital Badges

Initiative 1 consists of short online courses and accompanying digital badges (micro-credentials) specifically created by partners and international experts, that certify the learning outcomes of short-term learning experiences. These encourage students and staff from all disciplines (especially those not traditionally included in entrepreneurship activities, such as arts, medicine, nursing etc.) to learn about, and embrace, sustainable entrepreneurship and the role it plays in addressing societal, economic and environmental challenges. Short online courses and digital badges are available to all partner institutions at all levels: second level, graduate and postgraduate, executive education and adult continuing education, as well as for junior and senior staff who teach entrepreneurship.

Initiative 2: Simulation Technology

Although partner institutions currently use various simulation technologies for entrepreneurship education, there is a need for a bespoke simulation game that integrates sustainability with business decisions, strategies and innovation. This collaborative project used opportunities in technology-supported business simulation games as an effective tool for entrepreneurship education. Through collaboration with industry, an existing simulation game was tailored by adding completely new elements: an emphasis on learning about SDGs-driven entrepreneurship ideas, techniques and best practices, and how they impact the key business outcomes such as strategy, costs, margins and profits. In this bespoke simulation game tried and tested by the staff, students make a series of informed decisions over several rounds, which imitate the real-life business environment. The goal is to achieve the highest score across different categories, including as high a profit as possible, in addition to getting a high sustainability score, while making numerous trade-offs along the

way. The scenario includes managing a new coffee shop and the SDGs are incorporated into the simulation game through modelling and algorithms and students see the consequences of the SDGs-related decisions on their in-game dashboard.

Initiative 3: Master Classes

Initiative 3 is collaboratively developed by the partners and the emphasis is on sharing partners' knowledge, resources and good practices in entrepreneurship education, with an SDGs component, to enhance the existing offerings and student learning experience. This initiative includes master classes among partner institutions with each partner identifying the appropriate student cohort (e.g. as part of a module or at partners' accelerators/ incubators) for a master class and organising a master class delivered by an external expert for those partners teaching entrepreneurship. Master classes focus on covering materials related to the SDGs and entrepreneurship and vary in length and format. Such exchanges and learnings among partners foster closer collaborations, introduce different perspectives to students and encourage creativity in teaching techniques.

Initiative 4: SDGs-driven Entrepreneurship Toolkit

To ensure that this project also creates materials that can be used and adapted according to various timelines and needs of staff teaching entrepreneurship, partners will develop an SDGs-driven Entrepreneurship Toolkit that assists in teaching entrepreneurship with an SDGs focus. This Toolkit will provide inspiration for staff and include examples ready to be applied in the classroom or during activities such as SDGs-focused hackathons, business plan competitions, summer schools or bootcamps.

Initiative 5: Hackathon for SDGs

The fifth initiative is an SDGs Hackathon where undergraduate and postgraduate students from the partners have an opportunity to come together as teams in a one-day hybrid event (in-person at each institution and all institutions connected online) that includes solving a problem related to one of the SDGs, with a structured approach and mentorship along the way. There has been a lack of, or no, Hackathons at partner institutions dedicated to developing entrepreneurial ideas from different sectors and underpinned by the SDGs. Hence, we recognised this as a unique opportunity to align partners' efforts to advance the SDGs agenda through education and co-creation of innovative solutions for the SDGs through a Hackathon for SDGs.

This presentation will explore the dynamics, opportunities and challenges of the project's collaborative approach to:

- Sharing resources through Short Courses with Digital Badges and a simulation game
- Designing new materials to advance Short Courses
- Sharing knowledge and best practices through Master Classes
- Creating a unique Toolkit to enhance SDGs-driven entrepreneurship education
- Hosting student-centred Hackathon using shared experiences and resources
- Building a network of HEIs that champion SDGs-driven entrepreneurship culture across Ireland, with industry stakeholders and international collaborators
- Producing academic outputs and forging relationships for long-term collaboration in entrepreneurship education and the SDGs area.

Conclusions

Entrepreneurship and sustainability are key drivers in Ireland's future success. The "Developing SDGs-driven Entrepreneurship Culture Across Ireland" project is a game-changer in entrepreneurship education, as it represents a novel, sustainable, collaborative and student-centred approach to embedding an SDGs-driven entrepreneurship culture across six partner institutions. It consolidates the partners' broad expertise, experiences and resources to enrich each other's entrepreneurship education offerings for the benefits of students and goes a step further to develop innovative teaching techniques and champion an SDGs-driven entrepreneurship culture across Ireland. It closes the current gap that exists between entrepreneurship education and the SDGs through a novel collaborative approach across institutions by designing dynamic tools for teaching SDGs-driven entrepreneurship and advancing the student learning experience. This ensures that the partner institutions nurture collaboration to pioneer better practices that enrich the way entrepreneurship is taught across Ireland. Our project also facilitates the development of a first of a kind national network of HEIs focused on SDGs-driven entrepreneurship education, with the opportunity to further expand nationally, and grow to engage internationally, representing Ireland's thought leadership in SDGs-driven entrepreneurship education.

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Empowering RME through Experiential SDG Engagement: Post-Project Reflection of PRME UK&I Innovative Pedagogic Approaches and Teaching Practices Award Implementation

Dr Johanna Clancy (University of Galway)

Introduction and Purpose

This extended abstract reflects on the delivery and outcomes of a project implemented following the PRME UK&I Chapter's Innovative Pedagogic Approaches and Teaching Practices seed funding prize awarded to Dr Johanna Clancy in 2024. Dr Clancy is an Assistant Professor in Business Enterprise at the J.E. Cairnes School of Business & Economics at the University of Galway, Ireland – "*a globally engaged School of Business and Economics for the public good that makes a transformative impact for students, society and business*" (https://www.universityofgalway.ie/business-public-policy-law/cairnes/strategicplan/).

The project aimed to embed the UN SDGs into a hands-on Executive MBA and MSc module by connecting students with SMEs, social enterprises, and community organisations. The overarching ambition was to foster student learning through real-world engagement with sustainability challenges, while simultaneously increasing SDG literacy and agency among regional stakeholders.

The project was underpinned by strong alignment to the PRME Principles. While inherently the project addressed all seven PRME Principles, the unique value of this project was in partnering to jointly explore effective approaches (P5: Partner), as well as supporting national dialogue and knowledge exchange in a stewardship-type role (P7: Share). It also answered the call for more practical, systems-oriented learning in management education (PRME, 2023).

Ireland's policy context added urgency to this project. Despite the country's commitment to the SDGs, national reports highlight persistent gaps in private sector engagement and practical implementation, particularly at SME level, underscoring the need for enhanced collaboration between government, academia, private sector, and civil society to mobilise resources and share knowledge for sustainable development (CSO, 2022; Global Compact Network Ireland, 2023). The project thus positioned students as knowledge brokers, capable of bridging this implementation gap.

Project Rollout: Description and Implementation

The project was implemented over a 12-week semester as part of an executive MBA and MSc module - Responsible Management & Leadership, with a project title of "A Better World Through Better Business". Students formed consultancy-style groups and partnered with a diverse range of regional SMEs, charities, and social enterprises — ranging from arts organisations to rural start-ups. They conducted interviews, stakeholder mapping, industry best practice scanning, and SDG diagnostic assessments, using a combination of the Chambers Ireland SDG Toolkit (Chambers Ireland, 2021) and a simplified bespoke visual framework developed in class to help decode SDG alignment and impact for non-experts.

The project culminated in a PRME UK&I-funded capstone workshop, where students presented strategic SDG-aligned recommendations to their partner organisations, which included a 20-page report and a workplace-appropriate high-level poster. This workshop reinforced the role of students as change agents and strengthened cross-sectoral dialogue on how to localise SDG implementation. The event also included:

- A panel of local SME and NGO leaders reflecting on sustainability challenges
- Interactive focus groups between students and stakeholders
- A collective discussion on regional SDG innovation ecosystems and the role of the University (Facilitated by the University's Director of Sustainability)

Pedagogical Innovations and Theoretical Framing

The pedagogical design rested on experiential, interdisciplinary, and heutagogical principles — foregrounding student autonomy, reflexivity, and real-world learning. Students were active facilitators of stakeholder learning, acting as boundary-spanners between theory and practice, emphasising the importance of enriched reciprocal learning, where both students and organisational partners benefit from the exchange (Fougere et al., 2020). The curriculum drew heavily on Kolb's experiential learning cycle (1984), embedding iterative loops of action, reflection, conceptualisation, and experimentation. It also drew from heutagogical principles, empowering students to co-design elements of the project and take ownership of how they engaged with stakeholders. The module design aligns with systems thinking, a core competence in sustainability education (Weber et al., 2021).

Notably, the project operationalised the PRME i5 Framework (PRME, 2022) in practice. Its five core elements were fully integrated:

- *Hands-on and minds-on*: Students applied SDG theory in live consultancy
- *Hearts-on*: Values-led decision-making and empathy-building featured strongly
- *Socially interactive*: Peer and stakeholder collaboration was central
- *Joyful*: Feedback from students highlighted the satisfaction of contributing to real outcomes
- *Iterative*: The scaffolded assessment and workshop format encouraged developmental learning

Outcomes and Impact: Student Learning

The impact on student learning was significant, both in cognitive understanding of the SDGs and in affective/personal development. Feedback demonstrated a shift in how students viewed their role in business and society. Students reported feeling empowered to act as "consultants for good," often for the first time viewing themselves as potential changemakers. One wrote, "*I didn't think I had the expertise to advise a business on sustainability. Now I realise I have the tools and mindset to make a difference*". Additionally, students demonstrated increased systems thinking — recognising interlinkages between environmental, social, and governance goals. By decoding SDGs for stakeholders, they deepened their own learning and understood the nuanced nature of translating global goals into local practice. These outcomes align with research showing that experiential and values-based learning fosters long-term commitment to sustainable management (Rinaldi et al., 2021).

Outcomes and Impact: Industry/Community Engagement

Stakeholder feedback was overwhelmingly positive, with many SMEs reporting that the students helped clarify their understanding of the SDGs and opened new avenues for responsible innovation. Several organisations took concrete follow-up steps after the workshop, including sustainability audits, B Corp scoping, or joining the local Chamber of Commerce sustainability working group. The project also strengthened community ties and institutional reputation. One Chamber representative noted: "*These students are showing our SMEs the future of business — practical, values-led, and collaborative*." Another local charity expressed surprise at the professional level of student analysis and invited their student group to remain involved as voluntary advisors. This reflects broader research highlighting the mutual value of academic–community partnerships in advancing sustainability in an impactful and enduring manner (Turner and Piso, 2024). The project modelled how business schools can act as catalysts for community resilience through RME.

Knowledge Transfer and PRME Community Value

This project has clear potential for replication across the PRME UK&I network, especially in small-city and rural contexts where universities play an anchor role in regional/local ecosystems. The toolkit developed for student–stakeholder engagement will be shared with other institutions in the PRME UK&I Chapter and could be further developed into an open-access resource. The project also serves as a potential blueprint for embedding SDGs into core modules or capstone projects. It fosters student agency, addresses real-world gaps, and amplifies local SDG action. The event format — combining student presentations, peer learning, and community dialogue — was cited by participants as one of the most meaningful learning experiences of their academic programme. At a wider level, the project contributes to thought leadership on how RME can generate "systems impact" by mobilising students, universities, and SMEs into shared learning ecosystems (PRME, 2023).

Reflection and Next Steps

Despite its success, the project was not without challenges. Stakeholder time constraints and the complexity of measuring SDG impact required sensitive facilitation. Time investment from the module leader was also considerable, underscoring the need for adequate institutional support for this kind of embedded, high-impact pedagogy.

Nevertheless, the benefits far outweighed the limitations. Future iterations will consider building in more follow-up support for community partners, in addition to the report and workplace poster developed. There are also plans to scale the model through a cross-disciplinary elective, bringing in environmental science and public policy students to enhance systems thinking and innovation capacity.

In closing, this project demonstrated how PRME-aligned pedagogy can generate deep, multidimensional value: equipping students to act ethically and systemically, supporting SMEs on their SDG journey, and strengthening the university's civic mission. It exemplifies a shift from RME as traditional classroom content to a dynamic lived practice that actively shapes society, supporting the move towards immersive, action-oriented education that equips future leaders to effect meaningful societal change (Hibbert and Wright, 2022; Espinoza, 2025).

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Empowering Sustainability Research through Hybrid Cross-Institutional Interdisciplinary Student Mobility

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Sustainability refers to the ability to maintain processes or outcomes over time (Basiago, 1998), often linked to the enhancement of economic, ecological, and social systems for human development (Milne & Gray, 2013) and focusing on with fulfilling human needs without depleting resources (Thomas, 2015). Aligning with the principles of sustainability and the United Nations' 2030 Agenda for Sustainable Development, our team of scholars from Bournemouth University (BU) and Universiti Sains Malaysia (USM) designed a project for developing innovative and sustainable student mobility initiatives for Supporting University Network for Research in Sustainability Engagement (aka the SUNRISE project). We were successful in securing funding from the British Council *UK-Malaysia Going Global Partnerships Grant for Student Mobility 2023* programme. This paper presents the work we have done to empower sustainability research through hybrid cross-Institutional Interdisciplinary student mobility, the outcomes and the legacy of the SUNRISE project.

Our project aimed to leverage student online and hybrid mobility for building capacity for research on and effective actions for sustainability and the UN Sustainable Development Goals (SDGs). This international collaboration provided a platform for students and staff from both universities to showcase their research to a wider audience of researchers. The work resulted in valuable insights into effective digital mobility as a sustainable alternative to traditional travel leading to reducing the carbon footprint associated with physical mobility. Key outcomes included the creation of global research networks, increased student engagement in sustainability discussions, and enhanced cross-cultural academic exchange with an interdisciplinary approach.

By adopting a hybrid participation model, SUNRISE ensured inclusivity and accessibility while allowing students and academics to gain insights into sustainability challenges across different regional contexts. Dissemination efforts have included academic presentations, reports, and digital platforms to maximize the project's impact. These interdisciplinary events and research exchanges not only enhanced participants' skills but also fostered innovative sustainability solutions. Additionally, they provided a platform for researchers to collaborate, engage in constructive discussions, and exchange feedback and questions on each other's work.

Three major hybrid events streamed via Zoom were hosted at times accommodating the 7h time difference. These addressed sustainability themes common for both institutions, such as Food Nutrition and Eating Behaviour (SDGs 2, 3, 12), Gender Equality (SDG 5), and Sustainability and Employability (SDGs 4, 5, 8). Each event started with a welcoming address by the BU Vice Chancellor and a research dignitary at USM, endorsing the importance of the initiative and the innovative approach in sharing details of the studies via the SUNRISE multimedia digital exhibition Padlet.

The first event, "*Celebrating Staff Excellence*" (24 April 2024), showcased sustainability research by BU and USM faculty, engaging 42 participants in a hybrid format. The event brought together attendees and participants with diverse backgrounds and expertise, contributing to its Padlet success. All materials from BU and USM staff were submitted via form, then uploaded to the SUNRISE showcase Padlet to raise awareness of staff projects and inspire students and colleagues from the home and partner institution in exploring these and similar topics. The submissions were organised according to their alignment with specific Sustainable Development Goals (SDGs) and included clear labels with authors' details, enabling further networking between the attendees and beyond. Three presenters from each university were selected to present their work to the hybrid audience from BU and USM students and staff. They consider topic and gender diversity, and of the impact to either academia or practice.

The second event, "*Celebrating Student Innovation*" (9 May 2024), featured sustainability projects by master's students and engaged 88 participants, including BU Event Management students who helped in organising and running the event, gaining practical event planning experience while allowing them creative freedom to incorporate new ideas. This approach reflects a strong commitment to staff-student collaboration and co-creation, promoting reciprocal mentoring, innovation, and knowledge exchange. Some of the highlights of the presentation were "*Factors that influence the purchasing decisions for sustainable by generation Z in Ghana*" (BU student), "Active Doctors, Active Patients" (USM student) which addressed the importance of physical activities and quality of life and reduce the effects of chronic diseases. The diversity of the topics made the conference a more engaging and interactive event. A sustainability-focused quiz designed by the event management team to test sustainability knowledge while reinforcing key sustainability concepts, proved to be a welcome activity for both USM and BU on-campus and virtual participants. This engaging and interactive opportunity, offered a practical example of the PRME i5 impactful learning principles (Storey and Ibrahim, 2025), bringing students and staff together in one hybrid community that enjoyed learning and celebrating those who successfully answered the questions. The event concluded with a lively informal session, where participants from both universities introduced themselves, sharing interesting facts about themselves and their work. This engagement unveiled commonalities and shared interests, highlighting potential ways for future academic and professional collaboration and connections.

The final event, "*Inspiring International Collaboration*" (23 October 2024), brought together students, alumni, professions across different levels, facilities, and education background, which emphasized the collaboration between BU and USM and diverse community involvement. The event featured presentations by PhD students from BU from USM. The presentations covered diverse topics with each connected to specific SDGs. The second part of the event focused on diversity and inclusivity, and how to make these knowledge sharing events open to a wider audience and more inclusive for people with neurodiversity and disabilities.

The Malaysian partner shared their experiences in organising a session for the Malaysian Deaf Community across various programs, reflecting on the recognition that deafness is a cultural and linguistic identity. The discussion that followed recognised this as constraint for joint cross-cultural initiatives for people with sensory disabilities. It concluded on the importance to continue pursuing inclusivity and diversity of the audience for the SUNRISE events, focusing on these audiences within their respective institutions. The good practice

and lessons learnt through these experiences are to be documented, shared, and synthesised to develop a blueprint for organising inclusive, accessible, sustainable and impactful events with minimum carbon footprint. An invited talk from the Head of the BU Assisted Learning Support (ALS) services offers a wealth of helpful points for supporting individuals with disabilities, and students facing challenges such as dyslexia in addressing some of the SDGs such as SDG 4 – Quality Education.

An i5 catalyst for the last part of the event were the video diaries and the reflections of three USM students. Having previously participated in two SUNRISE events in person at USM, these students travelled sustainably to the UK to join the BU participants for this final event. Their personal accounts started an insightful discussion on participants' experiences with digital mobility, slow travel, carbon footprint offsetting, and other sustainable strategies for minimising carbon output from future hybrid conferences. This dialogue deepened the knowledge exchange and fostered a more comprehensive understanding of sustainable academic collaboration.

The SUNRISE project met all objectives outlined in the proposal: it built a digital platform for showcasing sustainability research and delivered three successful student and staff conferences that were promoted across diverse audiences.
An unexpected yet highly impactful outcome of the BU-USM project was the establishment of the SUNRISE Student Sustainability Champion award. The award is a product of the collaboration between the project team and the BU Sustainability team who were inspired by the student work reported at the three SUNRISE events. It is created to recognise and celebrate students' contributions to sustainability while at BU and encompasses a wide range of activities, from assignments to campaigning or raising awareness of a sustainability-related issues. Students can be nominated by other BU students or staff. All nominees receive a certificate for their contribution to sustainability. We are looking forward to assessing the appeal and potential extension of this initiative in collaboration with other universities in the UK and globally.

A final blueprint for future digital mobility initiatives will offer insights for similar projects moving forward and serve as the legacy of the SUNRISE project alongside the SUNRISE Student Sustainability Champion award and the digital exhibition Sharing BU and USM Staff Sustainability Projects.

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From Response-able to Responsible AI Use: The Promise of Ecopedagogy

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Locating AI in Education – Some Policy Reflections

The adoption of Generative AI ('AI') in learning is widely discussed (Zhou & Schofiled, 2024; Manolchev et al., 2024; Rasul et al., 2023) and the stakes are high – its use in education is valued at $6 billion in 2024 (Miao et al., 2021). UNESCO, the UN's education agency and formal guardian of SDG4 ('inclusive and equitable quality education') has itself produced several recent reports on the opportunities and challenges of embedding AI in all aspects of curriculum development, including teaching, learning and employability.

For instance, the AI and Education Report (2021) foresees a range of efficiency benefits of using AI in education. Providing that 'ethical, inclusive and equitable' safeguards are put in place, AI can support classroom-based and lifelong learning. The report points to education chat-bots, intelligent tutoring systems, evaluation of student writing and integrated (AI-human) learning approaches as some of the pedagogic means through which this can be achieved. The European Commission's DigComp 2.2 Report (Vuorikari et al., 2022) provides examples of how its key competencies (digital, civic, literacy and so on) and proficiencies can be used in education to align learning and employability outcomes. Recent reports from industry appear to support the value of providing graduate employees with AI skills. As an example, 74% of the companies surveyed by Accenture had already enhanced their internal processes with AI, and 63% were planning to increase their AI-capability by 2026 (Accenture, 2024a). Where businesses had sought to improve their AI-capability across internal functions – from IT, marketing and finance to research and development, they seemed to be outperforming non-AI using peers in both productivity (up to 2.4 times) and revenue growth targets (up to 2.5 times) (Accenture, 2024b).

Guidance on what steps educators need to undertake to support this process is offered in the European Commission's (2023) teacher competence report. Framed around three segments, it extols the need for 'teaching for AI', 'teaching with AI' and 'teaching about AI'. Respectively, those refer to 'knowledge, skills and attitudes' towards artificial intelligence; designing learning outcomes and pedagogies that utilise AI models and expanding the 'human dimension' of AI in terms of learning and employability skills. Such policy developments echo UNESCO's Beijing Consensus (2019) framework and its key principle of preserving human ('teacher-learner') interaction at the centre of education design and delivery, even as curricula and pedagogic approaches are transformed to facilitate AI integration and innovation.

Response-able or Responsible AI: The Promise of Ecopedagogy

For us, this raises questions on whether harnessing the 'response'-able efficiency of AI also constitutes responsible use of AI. We consider this along two distinct but interconnected dimensions. First, whether policy recommendations sufficiently address educator readiness for the adoption of AI technology and second, whether adopting an Anthropocentric definition of responsibility is enough. Concerns about educator readiness are anchored in

reports, such as those produced by the UK Department for Education (2024), which shows that while over 70% of learners regularly use GenAI in their studies, this is the case for just over 42% of educators. There is also an increasing number of studies discussing educator reticence towards working with AI on account of insufficient skills (Luckin et al., 2022), ethical misgivings (Holmes et al., 2022) or student-centred considerations such as accessibility and intersectional inequalities (Casas-Roma et al., 2021). Questions about the sufficiency of an Anthropocentric view of ethics are prompted by growing evidence of AI's large energy needs. This is evidenced, for example, in Google's plans to support its AI development through building modular nuclear reactors (Terrell, 2024) and BBC's (2024) projections of a six-fold increase in energy use by data centres over the next decade.

In this extended abstract, we consider those two questions through the theoretical lens of ecopedagogy, a framework inspired by Brazilian educator Paulo Freire's critical pedagogy and the reputed topic of a book, left unfinished due to his passing (Jandric and Hayes, 2022). At its core, ecopedagogy is a praxis-driven approach, which does not impose an either-or segregation between struggles for environmental and social justice (Mesiaszek, 2022). In this sense it is a 'critical and transformative' (ibid.) move away from environmental pedagogies (whether focused on sustainability, ecology and so on), on account of the latter's tendency to overlook the social impact of environmentally harmful acts, as for instance, AI's reliance on energy and natural resources (UN Environmental Programme, 2024). Ecopedagogy thus seeks to offer a systemic understanding of responsibility that does not reject human rights, but goes beyond Anthropocentrism to and offer a biocentric/ecocentric ethical stance. A stance, informed by our shared responsibility (Jonas, 2009) towards ecosystems and living species (IndelliCato, 2021).

Thus, we view ecopedagogy as not only helpful but necesary in discussions on the use of AI in management learning and education since it not only provides a systemic theoretical framing of responsibility, but problematises the fluid, nebulous and 'messy' terrain of postdigital education (Jandric and Hayes, 2022; Jandric et al., 2018). In this study we also address calls to revisit ecopedagogy in the context of digital technologies (Jandric and Hayes, 2022). We do so, by adopting another of ecopedagogy's core principles – that of establishing (interdisciplinary) connections across practitioners, professionals/industry and interested groups (Kahn, 2008). The site for our work is an institutional education incubator-funded and ongoing project ('AI and I') on responsible AI use, developed through the interdisciplinary input from academics, a student partner, a curriculum developer, and a learning designer. In the remaining section we provide a brief overview of the project, share preliminary findings, and outline recommendations for responsible (ecopedagogic) practice.

Towards an AI Ecopedagogy – The 'AI and I' Project

The 'AI and I' project (September 2024 – March 2025), seeks to understand lecturer and student attitudes and experiences of working with AI. At the time of writing, the project has completed three focus groups with a total of 62 Business School academics (37 female, 24 male and 1 who preferred not to specify). All focus groups took place online, where participants were split into break-out rooms, facilitated by each researcher. MS Teams is a familiar working environment for UK higher education institutions, and yet we ensured co-ordinated facilitation by planning and sharing expectations on the time spent per questions to focus discussions (Cherrington et al., 2024).

Participants were invited to reflect and share their experiences and observations on four broad themes for the duration of one hour: (1) the use of AI in their own practice; (2) the relationship between AI and learning outcomes; (3) the impact of AI on the accessibility of learning and (4) considerations of responsible uses along two dimensions – learner accessibility and environmental impact.

The preliminary analysis was carried out in NVivo 15 by the lead author with the second and third author contributing to the theme dimensions. An overview of key themes, associated dimensions, coding references and correspondent number of files in which the coding reference appears is provided in Figure 1 below.

Figure 1: an overview of themes and theme dimensions

Theme	Theme Dimensions	Files	References
AI use on own practice	Actively use AI	**8**	**22**
	Not using AI	5	12
	Using AI minimally	6	11
AI and learning outcomes	AI supports learning outcomes	7	17
	AI harms learning outcomes	7	17
	AI has an unclear impact on learning outcomes	**7**	**25**
AI and accessibility of learning	AI improves accessible learning	2	2
	AI reduces accessible learning	4	8
	AI has an unclear impact on accessible learning	4	**9**
AI's environmental impact	Environmental impact is a factor	6	**9**
	Environmental impact isn't a factor	5	7
	Environmental impact is one factor among many	5	6

We found that participants were almost twice as likely to discuss their readiness to use, (22 references) rather than challenges with using (12 references) AI in their teaching practice. Overall, participants were more likely to use AI in the early stages (ideation, lecture structure, case study content) and the delivery (presentation look and feel) of teaching, preferring to retain control over writing, and choice of sources. However, despite discussions of AI readiness, the predominant view (25 references) was that AI's impact on learning outcomes was unclear. Participants felt that AI both supported and enhanced critical thinking and employability skills in students, but were concerned about AI's tendency to generalise, simplify and lose nuance to such an extent, that its outputs became unhelpful. A participants made several calls (echoing the European Commission's DigiComp2.2 report) for improving students' and their own basic AI literacy, starting with the fundamentals of prompt engineering.

Relatedly, we encountered only two instances of participants discussing the benefits of AI for student accessibility, whereas on 8 occasions participants felt that gaps in pay/free AI access will reinforce the digital divide .In turn, there were 9 instances of participants suggesting the need for institutional support for low-income/marginal group students to improve accessibility. Finally, and with regards to the sustainability dimension of responsibility, participants felt the environment impact of AI not to be a factor in almost as many (7 references) instances as those expressing concerns (9 references) with AI's use of energy, contribution to climate change and responsibility to future generations.

Viewing these preliminary results through the lens of ecoped(AI)gogy, we would like to conclude this extended abstract by putting forward three propositions for management learning educators and institutions:

1. Provide 'environmental impact of AI' literacy training as part of any digital and employability skills provision.
2. Offer basic prompt engineering support to students in order to improve interaction efficiency, thus limiting the environmental impact of AI use, while allowing students to retain criticality and control over the learning process.
3. Further enhance educator readiness and future-proof learning outcomes by revising – or extending – existing learning outcomes along the three dimensions of the European Commission's (2023) guidance: teach-with, teach-about, teach-for AI.

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How to do the Greatest Good? Educating for Compassion and Curiosity in Analysing Stakeholder Communities' Needs

Prof. Harry Van Buren (University of Tennessee at Chattanooga & Queen's University Belfast) & Dr Annie Snelson-Powell (University of Bath)

Discovering the needs of others has been overlooked in current conceptions of stakeholder analysis as well as in how we educate managers to take care of stakeholders. Put directly, if one goal of businesses is to create value with and through stakeholders, knowing what stakeholders value (and why) is essential. Understanding a business' impacts on others – and especially those stakeholders who are most vulnerable to mistreatment – requires that managers know who they are as well as also be willing and able to learn from and about them with curiosity and compassion. However, there has been a lack of attention to the 'names and faces' of stakeholders (McVea and Freeman, 2005), which can lead to a kind of homogenization and dehumanization of them. Indeed, businesses should relate to stakeholders not as homogenized groups of generalized others, but rather as concrete and particular others with different values, goals, and needs (Benhabib, 1985).

By definition, the needs of the most vulnerable and disempowered in society are not the needs that most managers are closely familiar with (Van Buren and Schrempf-Stirling, 2025). Stakeholders who are far away in physical and social space from managers are likely to be invisible to the latter (Jones, 1991; Mencl and May, 2009). Similarly, the needs and values of future generations can only be imagined. In order for managers to tend to stakeholder needs when those stakeholders are different in time, space, locale, and social position, they need to exercise moral imagination (Werhane, 1999) – and the business schools that train them are one place where they can start to engage such imagination through exposure and practice. However, one question persists: where is this process of deep, reflective, and human-centred learning in the education of managers we provide?

Managers are typically in a position of great privilege (Kilkauer, 2015).[1] They preside over the distribution of business resources, opportunities and benefits, as well as being responsible for the harms and costs of production. In taking care of stakeholders, we might expect the fair distribution of both the benefits and the costs to the people involved. And yet in practice we see the consolidation of benefits flowing to those with accumulated wealth, all the while the less powerful are exploited and held in precarious circumstances; here we note that income inequality in both the UK and the USA is relatively high (Hill and Llyod, 2025). While rhetorically in teaching (and to some extent, research), business schools give equal credence to both doing well and doing good, in practice the latter is more the received message by students than the former (Harley and Fleming, 2021; Statler, 2014).

There have been useful correctives to the dominance of socially and environmentally unsustainable business and economic models. Brundtland (1987), for example, requires us to consider human needs; those of the world's poor and future generations are explicitly identified. While these ideas continue to provide the accepted framework[2] for what sustainable and just development looks like, the tools in use for stakeholder analysis do not

[1] We note here that many business schools, with their focus on career readiness and salary growth, hold themselves out as places where one's education can lead to such a life.

[2] "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

convincingly reflect this aim and managers from business schools do not emerge well-equipped to think about how business models affect current and future generations. Put another way, developing a deep understanding of others' needs appears to have escaped the management curriculum.

In a related vein, advancing the 17 Sustainable Development Goals (SDGs; Mio, Panfilo, and Blundo, 2020), by 2030 could encourage exciting innovations and entrepreneurship to span social, environmental and economic challenges. Indeed, the SDGs should encourage business thinking about whether prevailing business models work for the benefit of all stakeholders, but most particularly the least well-off. Yet nothing within accepted principles for stakeholder analysis makes space for noticing the silent and invisible stakeholders (Van Buren and Schrempf-Stirling, 2025) nor for engaging with the deep learning about the circumstances of others. Without curiosity and compassion, stakeholder analysis can give rise to an othering (Bondy and Charles, 2020), which allows managers to perform a version of corporate responsibility without a certain link to the betterment of vulnerable communities.

We watch now as new opportunities for development open up, albeit with disparate outcomes for different stakeholders. European countries are embarking on a green transition and less polluting electronic vehicles are becoming the focus of large automotive firms. While we can applaud the green transition as a means to progress SDGs, it also rife with injustice; for example, the cobalt that makes such technologies possible is mined in degrading conditions by the very poorest people in Congo who do not receive commensurate benefit (Radley, 2023). Despite the huge scale of these green industries – and the profits flowing to investors – the alleviation of suffering for the most vulnerable in supply chains has not been secured and economic efficiencies incentivise operations that exploit workers in precarious circumstances (CBI Economics, 2025; de Ruyter and Bentley, 2024).

We note that there are other ideas that are related to curiosity and compassion, but their promise has not yet been realized in management education. As an example, rights-based approaches provide an overarching guidance on the universal importance of human life and opportunity, but these concepts appear tangential and theoretical to managers who are not primed to absorb or respond to the widespread implications of this information. The reporting departments take on governance about human rights due diligence (Rogerson, Scarpa, and Snelson-Powell, 2024) and are supposed to report on infringements etc. but remedy etc. is a very rare event, usually requiring powerful actors to step in with support to amplify victims voices (Westermann-Behaylo et al., 2022).

Taking care of stakeholders implies compassion yet notions of stakeholder salience, within management pedagogies, are devoid of care and curiosity. From a vulnerable worker's perspective, they can be interpreted as patronising and colonialist. Negative consequences flow for the world's poor when they have low salience to managers, inherently restricted from attaining the power with which they could advocate for their urgency and legitimacy. Managers are typically characterized as self-interested, but at the same time rarely set out to do harm; in this respect they are more likely amoral than immoral (Carroll, 2000). Thus, there is thus a pedagogical window to exploit during where, through education on decision-making, the balance of harms and goodness could be brought into prominence through a deep and empathic enquiry of operational impacts on human and natural resources.

In the full paper, we propose to analyse the ways in which management education might be rethought to address issues related to stakeholder good as well as managerial compassion and curiosity. We start with an examination of the ways in which management education has not done as well as it might in helping students understand the needs of stakeholders – especially those that are distant from and invisible to managers. We then shift to considering how students might be exposed to ideas related to compassion that would bring the needs of such stakeholders to the fore, especially with regard to considering the potentially negative effects of business strategies. We conclude with a discussion of pedagogical strategies that can be used to enhance student curiosity about and compassion for stakeholders whose invisibility and distance from managers makes them vulnerable to mistreatment as well as how the needs of such stakeholders can be learned about and then fulfilled at (in many cases) relatively minimal cost.

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PRME Impact for Real: Student Views on Sustainable and Responsible Education – Three Business Schools; Past, Present and Future

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The Principles of Responsible Management Education (PRME) agenda from the United Nations (UN) and related sustainability initiatives, require universities to integrate sustainable and responsible management into their programmes and institutions. Consequently, PRME informs the curriculum (Morsing 2021; Eustachio et al., 2024), organisational structures (Russo, Wheeldon, Shrestha, and Saratchandra, 2023), and reporting mechanisms (Abdelgaffar, 2021; Hauser, 2019). Although these initiatives are important, the direct perspectives of students – their ideas that construct meaning for students as potential leaders and managers - tend to be overlooked (Høgdal, et al., 2021). Indeed, we have a limited understanding of how the agenda is valued by past, present and future students. This submission elevates the focus on students as critical stakeholders, integral to the PRME agenda and future custodians of organisations. A detailed focus on student's experiences and ideas will aid further understanding of the ideas that transpire from responsible management education.

Universities are under significant pressure to act meaningfully and lead the change they wish to see in society. PRME serves as a framework to help universities achieve sustainability goals. However, PRME has faced criticism for being overly challenging and complicated to implement (Boodhoo & Parumasur, 2017; Duffy, 2024). Further, like most accreditations, PRME is aimed at institutions as opposed to students, and even university reporting of student experience is filtered through their institutions (Eustachio, et al, 2024).

Marcon and Sehnem (2024) advocate for students being taught sustainability and responsibility in education, however, student voice has not always been sought (Abdelgaffar, 2021). Consequently, we know little about their nuanced perceptions of sustainable education; their need for sustainable education and critically how they construct ideas of themselves as future leaders and managers (Høgdal, et al., 2021). Granular understanding of student's ideas has the capacity to help universities collaborate with students to refine curriculums, structures and reporting to bolster responsible management education.

Where universities profess to be applied with a focus on the future impact of alumni as leaders and managers, a lack of focus on students as critical stakeholders is problematic. In essence, PRME is only a process without the meaningful support of stakeholders that diffuse ideas into the fabric of organisations.

Cripps and Smith (2024) advocate for the benefits of a sustainability mindset and the role that business schools have in achieving this outcome. The PRME initiative (2021) calls for greater impetuous in instilling the values of ethics and social responsibility and contributing to the development of future ethical leaders. However, DuPuis & Ball (2013) argue that the term 'sustainability' entered public discourse, it continues to escape meaning and definition.

This can be a source of frustration for students and learners who are used to being taught facts and absolute truths (Alexander, Winters, Loughlin, & Grossnickle, 2012). Understanding sustainability as a construct is complex. Subject to ongoing debate; it can "*be approached from different levels of reference, in time, space and from environmental, social and economic perspectives*" (Zaman and Goschin, 2010, p6).

In this vein, ideas matter reflecting the values, morals and principles that shape thinking and meaning (Weir 1992). The importance of ideas is explained by Mertha (2011, p.24):

> *Asserting that ideas do not matter would mean that shifting ideals about science, religion, democracy, slavery, colonization, gender, race, and homosexuality to pick just a few salient examples [...] have not appreciably affected how people act.*

Schmidt (2008, 2010) argues that ideas take centre stage in shaping institutional contexts and practice. By tracing the evolution of ideas across time, ideas which may not be perceptible or captured can be illuminated (Schwartz-Shea & Yanow, 2013).

Zaman and Gosschin's (2010) argument is therefore central to the focus of this research to reveal the perspective of present and future students, accounting for the importance of meaning in time, as well as from environmental, social and economic dimensions.

By exploring students' values relative to social, economic and environmental sustainability at a granular level, our work aims to facilitate understanding of personal ideas simultaneously helping students construct and notice their personal orientation as well as providing nuanced insight to institutions about the efficacy of the PRME agenda.

We propose listening to student voices for real, capturing detailed accounts of student's experience(s) of responsible management education in business schools as well as their ideas about the perceived and real impact on their careers.

Proposed methodological approach

Choosing appropriate research approaches is challenging, there is no one perfect way. In light of illuminating the sustainability mindsets of students as highlighted by Cripps and Smith (2024) we turn to methods founded on the construction of ideas that framing attitudes and values towards sustainability that ultimately orient students' organisational and professional practice (Avelar, Michell, & Sandes-Guimarães, 2025). They are a formal feature of annual reviews, supporting action learning, shaping or refining personal and organisational practice in solving problems responding to opportunities and aligning with organisational goals. By articulating ideas through reflection, individuals can understand the way they seek to contribute to practice. In sharing reflections, institutional actors can surface the values to explore and understand how agendas land, collaborating to energise, develop and refine creative thinking and emancipatory practice.

Developed by Cooperrider and Srivastva (1987) as a vehicle for organisational change, Appreciative Inquiry (API) explicitly adopts a strengths-based approach. Drawing on the theoretical foundations of social constructionism it seeks to catalyse action and change through reflective practice that challenge self-limiting beliefs (Duncan and Ridly-Duff 2014). API draws on participants experiences but also their capacity to consider the '*best of what if*'

essentially creating affirmation and purpose around change (Arnold et al., 2022). For responsible management education, this is congruent with learner centred pedagogies (Sotiriou, 2021) and agency and translates agendas into meaningful experiences for student's past, present and future.

From this understanding of ideas, we propose to undertake an exploration to reveal students and alumni articulation of their ideas of environmental, social and economic sustainably. The study takes participants from three HE institutions across the UK, express a commitment to support the applied and practical significance of learning. Of the three, two are PRME Signatories, the third is working towards this and runs several programmes focusing on sustainable, ethical and responsible business management. This difference in institutional status was seen as a useful way to gain insight into the significance of PRME as well as other responsible management agendas that orient students' ideas. Though each of the business schools from which participants are drawn share a similar organisational ethos that foregrounds practical learning, the communities they service differ significantly. The first is located in a post-industrial city where employment now coalesces around the private sector and particularly in financial services, the second is configured around industry, the service sector and SMEs. Finally, the third has a strong maritime heritage with a thriving innovation ecosystem. The span of institutions furthers how differing locations or using Zaman and Goschin (2010) focus on space to explore the impactions of wider institutional ideas.

We argue that PRME alone cannot shape student attitudes but that social construction orients students towards economic, social, and environmental sustainability. In this research, the process of reflective discussion guided by API can elevate this orientation. An affirmative topic is key in framing the responses to reflective questions. Another part of the rationale to base research questions on affirmative methodologies is the impact of dealing with challenging topics. Some scholars argue that it is critical in helping people review approaches and priorities in work life.

Questions focus attention on specific directions enabling actors to see things from alternative perspectives (Smith, 2022). By reflecting and articulating events that inspire or overcoming challenges, deeply held values can be surfaced. API helps to build resilience, trust, new ideas, and creativity (Boyzatis & Jack, 2018). Such traits and values are seen to be critical in responding to wicked problems associated with ethical and responsible management and leadership.

Through self-directed reflection, we plan to capture and thematically analyse ideas that past, present and students articulate. Reflective guides (Kadi-Hanifi, et al, 2014) will be issued to assist students in following what is described in API as the 4D cycle. First, this involves 'Discovery' recording the problems, issues and opportunities related to sustainability. Second reflection around 'Discovery' generates insight into the best of their practice, personally or via organisations that are positive exemplars of sustainability. Thirdly, participants are encouraged to 'Dream', articulating ideal futures for themselves and where relevant to students, the organisations they are part of. The fourth D, 'Design', considers what and how individuals can deliver sustainability; ideal futures and how they can be delivered. The Fifth D, 'Destiny' engages thinking about state strong ideas can be enhanced and their wider benefit and capacity for change.

In sum, the method designed on the principles of API create impact from the premise that 'words create worlds' (Boyzatis and Jack, 2018). In essence, learning about learning vis-a-vis environmental, social and economic sustainability can promote collaboration across institutions and helps students realise how their knowledge of the area can enable them to respond to complex problems (Arnold et al., 2022).

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SOARing Together: Cross-Cultural Partnerships Driving Digital Transformation in Vietnamese Higher Education

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The digital transformation of higher education (HE) institutions has emerged as a pivotal strategy for achieving development goals, particularly those related to health, well-being, and lifelong learning. Digital transformation (DX) entails more than the adoption of new technologies; it requires a holistic approach that integrates institutional culture, stakeholder engagement, and collaborative partnerships (Mohamed Hashim et al, 2022). This abstract summarises the aims, methodologies, findings, and broader implications of a collaborative digital transformation project that demonstrates the pivotal role of strategic partnerships in achieving impactful change. The project exemplifies how partnerships can foster knowledge exchange, build capacity, and drive digital transformation through innovative approaches to digital maturity assessment.

The SOARing to Digital Transformation in Vietnamese Higher Education (DX-SOARing) project is a collaborative initiative involving Bournemouth University in the UK and three leading Vietnamese universities: British University Vietnam (BUV), University of Economics Ho Chi Minh City (UEH), and Tra Vinh University (TVU). This initiative aims to support Vietnamese HE institutions in navigating digital transformation by developing and piloting a digital transformation framework and digital maturity self-assessment tool tailored to the local context. These tools serve as instruments for evaluating organisational readiness and facilitating strategic digital transformation. The work on the project addresses a number of the recommendations raised in the Readiness of digital transformation in Vietnamese universities report published by the British Council in 2022, and in particular, providing a practical support for developing institutional policies and staff development opportunities, and designing a series of informal and formal activities between the project partners and their extended networks, to address challenges, share experiences and work together on the digital transformation agenda (Pitt et al, 2022).

By leveraging the Jisc digital transformation framework (Jisc, 2023c)—an established model within UK higher education—the project seeks to adapt and implement best practices that reflect the specific needs and values of Vietnamese universities. The selection of the Jisc Framework as a foundation for the Vietnamese DX framework was based on its holistic approach to organisational change. This model considers not only technological infrastructure but also people, practices, and institutional culture. It broadens the focus beyond physical and digital infrastructure to encompass the organisation's digital culture and on the core knowledge practices:

- knowledge creation and innovation,
- knowledge development,
- knowledge management and use, and
- knowledge sharing and partnerships.

An initial exploration of the experiences of Vietnamese partners with the Jisc maturity assessment, which is grounded in the framework, revealed that while the high-level overview was meaningful for their organizations, the interpretation of certain elements within each DX perspective was not always intuitive. This confirmed the need for contextual adaptation and clearer and relatable explanations of the elements to enhance the framework applicability and effectiveness.

To customise the framework, the project team engaged in both simplification and the addition of new supporting content relevant to the Vietnamese context. This iterative adaptation process involved a series of workshops and consultations with diverse university stakeholders, including administrators, faculty, students, and IT specialists.

Three digital maturity self-assessment workshops were conducted at BUV, UEH, and TVU to validate the relevance and applicability of the adapted framework. These workshops facilitated dialogue across different institutional levels and provided critical insights into the cultural and operational factors influencing digital transformation. The participatory nature of these workshops demonstrated the importance of engaging all stakeholders to ensure that DX initiatives are inclusive and aligned with institutional goals.

The adaptation of the Jisc framework highlighted several key findings regarding the digital transformation process in Vietnamese HE institutions. Stakeholders across the partner universities emphasised the need to promote a digital culture that supports continuous learning and innovation. They recognise that digital transformation is not merely a technical upgrade but a shift in institutional mindset, requiring new approaches to leadership, collaboration, and problem-solving. Meaningful stakeholder engagement emerged as a critical success factor for DX initiatives leading to effective utilisation of the underlying digital and physical infrastructure, and ultimately to sustainable DX journey.

Stakeholders recognised the value of integrating digital tools in a manner that allows for creating more personalised and flexible learning and transformation pathways. Universities must create channels for ongoing participation and feedback to ensure that digital strategies reflect the diverse needs of staff, students, and management.

These findings emphasise the critical role partnerships play in digital transformation by encouraging cross-institutional collaboration and facilitating the exchange of expertise. Effective DX strategies are strengthened by partnerships that help align technological advancements with institutional goals and provide mutual support for overcoming challenges.

The DX-SOARing project has provided a unique opportunity to build robust cross-cultural partnerships that enhance learning and collaboration. The adaptation of the Jisc framework required an in-depth understanding of the local institutional structures, cultural values, and educational priorities in Vietnam. This process revealed several opportunities and challenges associated with international partnerships in digital transformation. Cultural and institutional diversity can enhance innovation by offering multiple perspectives for consideration (Rodríguez-Abitia & Bribiesca-Correa, 2021). The collaboration between UK and Vietnamese universities has fostered a rich exchange of ideas and best practices, leading to more robust solutions for managing the challenges associated with digital transformation.

We recognise the importance of building trust and maintaining authenticity in cross-cultural communication to sustain effective partnerships. However, we faced leadership changes within partner institutions causing challenges with maintaining continuity and momentum in project implementation. Effective partnerships require mechanisms to manage transitions and sustain long-term collaboration. While digital tools such as artificial intelligence (AI) have facilitated communication and logistics, the project team remained mindful of the risks associated with over-reliance on technology.

The project underscores the vital role of research and innovation in advancing digital transformation within HE. By systematically assessing digital maturity, partner institutions have been empowered to navigate the complexities of DX with greater confidence and clarity. Research findings have contributed to the development of new learning resources and the refinement of academic strategies that promote innovation.

The project also highlights the importance of global engagement in shaping the future of education. Collaborative research initiatives such as showcasing how international partnerships serve as catalysts for meaningful advancements in teaching, learning, and institutional capacity-building. The insights gained from this project offer valuable lessons for other universities seeking to implement digital transformation strategies.

The project highlights the importance of continuous improvement and lifelong learning, equipping learners with critical thinking skills needed for a rapidly changing world. The long-term success of DX initiatives depends on the strength of partnerships. Effective collaboration requires time, patience, and a willingness to adapt goals and expectations over time. The project highlights that trust, mutual understanding, and clearly defined objectives are essential components of partnerships that enable continuous development and innovation. By cultivating these elements, institutions can build enduring alliances that drive educational advancement.

The findings from the DX-SOARing project offer several recommendations for policymakers, educators, and institutional leaders seeking to accelerate Agenda 2030 through digital transformation. Policymakers should prioritise initiatives that engage diverse stakeholder groups and address the unique needs of different institutional contexts. This includes providing resources and support for capacity-building activities such as digital maturity assessments and workshops.

Governments and funding agencies should facilitate cross-border partnerships that enable knowledge exchange and collaborative problem-solving. These partnerships can serve as platforms for sharing best practices and scaling successful innovations. Continued investment in research is essential for developing evidence-based approaches to digital transformation. Institutions should be encouraged to experiment with new technologies and pedagogical models while maintaining a focus on sustainability and inclusion. Education systems must adapt to the realities of the digital era by promoting lifelong learning and skills development. This includes integrating digital literacy and critical thinking into curricula at all levels.

The DX-SOARing project exemplifies how international collaboration and digital innovation can accelerate progress towards Agenda 2030. By developing culturally tailored frameworks and inclusive partnerships, the DX-SOARing project has contributed to a sustainable and

transformative vision for higher education. As universities continue to navigate the challenges and opportunities of the digital era, the lessons learned from this initiative provide a valuable roadmap for future endeavours. Ultimately, the project serves as a call to action for educators, researchers, and policymakers to work together in shaping an education system that is inclusive, innovative, and resilient for generations to come.

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The Entrepreneurial Toolkit for Sustainability: Skills, Strategies, and AI Integration

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Introduction

The imperative for sustainable action is no longer a matter of debate but an urgent necessity. Society can no longer afford to ignore the escalating environmental challenges that threaten the planet's long-term viability. As early as 1989, William D. Ruckelshaus, the inaugural administrator of the United States Environmental Protection Agency, drew parallels between the transition to sustainability and the transformative Agricultural and Industrial Revolutions. He emphasized the critical need for a conscious, science-driven shift, a call that has only grown more urgent with each passing year.

Today, the stark reality of our unsustainable consumption patterns is undeniable. The Global Footprint Network's 2022 report reveals that humanity's ecological footprint exceeds Earth's biocapacity by a staggering 1.75 times annually, indicating we are consuming resources at a rate far beyond the planet's regenerative capacity. Similarly, the seminal work "The Limits to Growth" (Meadows et al., 1972), which significantly influenced the Brundtland Commission's definition of sustainability, warned of impending ecological and societal crises. The 30-year update of this work further cautioned that without substantial changes, severe human distress could arise between 2030 and 2050.

Despite these longstanding and increasingly dire warnings, the progress towards a sustainable future has been disappointingly slow. The environmental impact formula, I=PAT (Impact = Population × Affluence × Technology), which highlights the factors contributing to environmental degradation, has only seen a minor evolution to I=PAT-e (incorporating efficiency and waste mitigation). This limited advancement underscores the persistent tension between economic growth and environmental sustainability. While policymakers frequently champion initiatives like Net Zero by 2050 and the circular economy, these efforts often remain rhetorical, lacking the concrete action required for meaningful change.

Government initiatives alone are insufficient to drive the necessary transformation. Businesses, particularly startups and small-to-medium enterprises (SMEs), must assume a leading role in sustainable innovation. However, these ventures face significant challenges. The high failure rate of startups, with over two-thirds failing to achieve profitability and three-quarters of acquisition-focused startups never reaching financial viability, highlights the inherent risks. These challenges stem from factors such as insufficient capital, inadequate market demand assessment, and recruitment difficulties. Similarly, intrapreneurship within established corporations often falters due to a lack of management buy-in, unrealistic expectations, and insufficient resourcing. This research aims to address these critical issues by examining the essential entrepreneurial skills required to foster sustainable business success.

Methodology

This research employs a comprehensive and integrative literature review to synthesize existing knowledge on entrepreneurial skills and sustainability. By drawing upon a wide range of academic sources, including peer-reviewed journals, scholarly articles, and influential books, this study aims to provide a robust theoretical foundation. Additionally, industry reports, white papers from reputable organizations, and expert analyses are incorporated to ensure a practical and up-to-date perspective.

The literature review focuses on three core areas that are vital for entrepreneurial success in the sustainability sector: (1) the entrepreneurial mindset, competencies, and tools (2) scaling and financial management, and (3) support systems with AI integration. The analysis aims to identify the specific skills and techniques that enable entrepreneurs to navigate the complexities of developing sustainable business practices.

Thematic analysis is used to identify recurring patterns and key insights from the reviewed literature. This approach allows for the categorization and synthesis of information, leading to the development of coherent frameworks that highlight the essential elements of sustainable entrepreneurship. The scope of the review includes examples from a broad range of industries and geographic regions to ensure the findings are applicable to diverse entrepreneurial contexts.

Key Findings and Proposed Framework

The research underscores the critical importance of cultivating a robust entrepreneurial mindset characterized by resilience, adaptability, and strategic thinking. Entrepreneurs in the sustainability sector must be prepared to navigate uncertainty, overcome setbacks, and adapt to rapidly changing market conditions and regulatory environments. Strategic thinking allows them to identify and capitalize on emerging opportunities, while resilience ensures they can persevere through challenges and setbacks.

Understanding funding opportunities is another cornerstone of sustainable entrepreneurship. It includes a thorough understanding of diverse sources, from venture capital and impact investment to government grants and crowdfunding. Entrepreneurs must also prioritize financial sustainability by balancing revenue growth with responsible resource allocation. Implementing circular economy principles, optimising supply chains, and investing in green technologies are crucial for scaling operations while minimizing environmental impact.

The integration of artificial intelligence (AI) plays a pivotal role in modern entrepreneurship. AI-driven analytics provide entrepreneurs with actionable insights into consumer behaviour, market trends, and resource optimisation. Machine learning algorithms can enhance supply chain efficiency, reduce waste, and minimize emissions. AI-powered financial models facilitate accurate revenue forecasting, risk management, and investment analysis.

Furthermore, external support systems are essential for entrepreneurial success. Governments, NGOs, and industry alliances offer funding, policy incentives, and strategic partnerships. Public-private partnerships, incubators, and accelerators specializing in sustainability- focused startups provide mentorship, resources, and market access.

Based on these findings, a comprehensive framework is proposed that integrates the three core areas. This framework emphasizes the need for radical innovation, characterized by the development of novel products and the creation of new markets, to meet sustainability goals. The framework also highlights the importance of fostering a collaborative ecosystem that supports entrepreneurs in their pursuit of sustainable business practice.

Discussion and Implications

This research significantly contributes to the understanding of entrepreneurial skills required for the successful launch and scaling up of sustainable businesses. The findings have profound implications for entrepreneurs, policymakers, and industry stakeholders. For entrepreneurs, the identified skills and strategies provide a roadmap for navigating the complexities of the sustainability sector and building resilient businesses. Policymakers can leverage these insights to develop targeted training programs, incentive structures, and regulatory frameworks that support sustainable entrepreneurship.

The research underscores the necessity of integrating sustainability into core business practices. This is no longer a peripheral consideration but a fundamental requirement for long-term success. The findings highlight the importance of adopting a holistic approach that balances economic, social, and environmental considerations.

The limitations of this study primarily stem from its reliance on a literature review. AI is a fast-evolving technology and future research should seek to update further developments as well as incorporate empirical data, such as case studies, surveys, and interviews, in order to provide more nuanced insights. Longitudinal studies could also track the long-term impact of entrepreneurial interventions on sustainable business outcomes.

Additionally, the research acknowledges that the adoption of new technologies such as blockchain and AI, while holding great promise, also requires careful consideration of ethical implications and potential unintended consequences. Further research should explore these aspects to ensure responsible and equitable implementation.

Conclusion

Entrepreneurship is a critical driver of sustainable innovation, demanding a unique blend of skills, strategic planning, and access to robust support systems. By cultivating an entrepreneurial mindset, mastering financial and scaling strategies, and leveraging AI and external networks, entrepreneurs can build resilient and impactful businesses. The integration of sustainability into business practices is no longer optional but imperative for ensuring a responsible and sustainable future.

Equipping current and future entrepreneurs with the necessary competencies will enable them to drive transformative change and create a business landscape that prioritizes environmental stewardship and social responsibility. This research provides a foundation for developing targeted interventions and policies that empower entrepreneurs to lead the transition towards a sustainable economy.

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The Informal-Formal Economy Interlock: An Indian Business Cycle Perspective

Gupta Debkanika (Newcastle University)

The 2025 PRME Chapter UK & Ireland Conference emphasises the transformative power of partnerships in advancing the Sustainable Development Goals (SDGs), while also recognising tensions surrounding their implementation, particularly issues of equity, accountability, and systemic exclusion. My research directly engages with the issues by examining India's informal sector, a space often sidelined in policy dialogues yet important for economic stability and social inclusion.

India is one of the world's fastest-growing major economies, with a GDP of 3.1 trillion US dollars in 2021 (Gupta 2022). India has a significant informal sector, similar to many developing countries (Schneider et al. 2010). Informal sector includes unregistered businesses (Harriss-White 2003), street vendors (Pilz et al. 2015), and home-based workers (Tipple 2005), among others. While the informal sector is often overlooked in discussions of business cycles, it is important to consider the role the informal sector plays in the overall economy, as this particular sector has a significant impact on macroeconomic indicators such as GDP and employment. This gap in the literature becomes even more apparent with the emergence of a new form of labour informality in India, where informal labour is increasingly being employed by formal firms. Hammer (2019) states that almost half of formal sector employment in India consists of informal workers. Abraham (2017) uses NSS 68th round data to show that in India, between 1999-2000 and 2011-12, formal labour employment is falling and informal labour employment in formal sectors is increasing. Following Economic Survey of 2021-2022, Government of India, the share of informal workers in the organised sector increased to 54% in 2017-2018. This duality challenges traditional categorisations of formality and informality. This type of informal employment is especially neglected in business cycle studies for India.

My research bridges the themes of both Building Communities and Navigating Conflict and Tensions, aligning with the PRME's fifth Principle, Partnership, and the UN's 17th Sustainable Development Goal, Partnerships for the Goals. We will find that the informal sector acts as a community-driven safety net, absorbing economic shocks and creating resilience in the face of shocks. However, our results will show that this resilience comes with tensions. Thus, if I had to choose one theme, it would be *Navigating Conflict and Tensions*, as my work interrogates the policy trade-offs and economic frictions that arise from the coexistence of formal and informal economies, reflecting the complex path toward achieving equitable growth.

A literature review shows formal and informal productivity shocks can have an important impact on the performance of the informal economy. In previous chapter of our PhD, we find that country risk depends negatively on levels of productivity for India. These findings raise an important question: does country risk respond differently to informal productivity compared to formal productivity shocks? Furthermore, the earlier chapter demonstrates that real interest rate shocks and country risk shocks play a pivotal role in shaping India's business cycle. Xu et al. (2018), utilising annualised panel data from 131 countries spanning 1999–2007, identify country risk as a robust and significant determinant of the informal economy, motivating to look into country risk and the informal sector in the Indian context.

Building on the motivation, we examine the impact of country risk, formal and informal productivity and real interest rate shocks on the informal sector of India. We capture the theoretical analysis for India by extending the Dynamic Stochastic General Equilibrium (DSGE) model of Neumeyer and Perri (2005) to include the informal sector in the model. We further conduct an empirical analysis for the informal sector of India for the dataset of 1996Q2-2016Q4 using the Mixed Frequency Bayesian Structural Autoregressive (MF-BVAR) model whose identification is based on the results of the DSGE analysis.

Our DSGE model consists of firms, households, and a government sector. Firms depend on a working capital loan to pay a portion of their wages to formal sectors before production begins, based on a contract. However, no such contract exists for informal labour as they are mostly devoid of any employment-related benefits. Households supply both formal and informal labour.

Formal labourers pay income taxes; informal labourers do not. Government revenue is decided by the income tax. Given a balanced budget condition, government revenue is equivalent to government expenditure. The real interest rate associated with the working capital loan is decomposed into a foreign real interest rate and country risk component. We explore three scenarios where country risk depends on independent causes, country risk can be induced by formal productivity shocks and country risk can be induced by informal productivity shocks.

We add to the original model of Neumeyer and Perri (2005) in the following ways: (1) inclusion of formal and informal labour with different wage rates; (2) inclusion of the contract with formal labour which states firms need to pay formal labour a portion of wages before production, unlike informal labour; (3) modelling of country risk depending on formal and informal productivity separately; (4) inclusion of taxation and the government sector.

We obtain data for foreign real interest rates, Indian real interest rates, government expenditure from Reserve Bank of India, World Bank, International Monetary Fund and Federal Reserve Economic Database from 1996Q2 to 2016Q4. We construct data series for country risk, formal and informal productivity levels following previous literature of Tiryaki (2012) and Neumeyer and Perri (2005). We use Dynamic General Equilibrium (DGE) estimates of the proportion of informal output as a percentage of GDP from 1996 to 2016 as our data for informal output. This data is obtained from Elgin et al. (2021) and is put forward by the World Bank database.

We estimate Mixed Frequency Bayesian VAR models identified using sign restrictions obtained from the DSGE model, to find the impact of the aforementioned shocks on the informal sector of India. Given the problems associated with degrees of freedom in the case of high parameters and low data and problems associated with potential multicollinearity, Bayesian methods are the preferred option. We find that the optimal lag for our model is four. We assume a multivariate Normal-Inverse Wishart prior distribution.

We find that positive foreign real interest rate shocks and country risk shocks result in a fall in formal employment and a rise in informal employment. Formal capital, investment, formal output, and government revenue fall. Formal consumption falls at first but increases in later periods following the Euler Equation. Informal output and informal consumption rise. This suggests that positive real interest rate shocks result in the contraction of the formal sector and the expansion of the informal sector. Foreign real interest rate shocks are more persistent but less volatile than country risk shocks.

For India, formal productivity shocks always lead to an expansion of the formal sector and a contraction of the informal sector. Informal productivity shocks lead to a contraction in the formal sector and an expansion of the informal sector. When formal productivity rises, country risk decreases for India. When informal productivity rises, country risk increases for India. Country risk responds to changes in formal productivity more than changes in informal productivity. The dependence of country risk on formal and informal productivity shocks leads to the amplified impact of shocks on the formal and informal economy of India. In India, informal productivity is less volatile than formal productivity, which previous literature (Leyva and Urrutia 2020, Coskun 2022) have found for Mexico.

Our main conclusion is that the presence of informal sectors helps curb the impact of most shocks on the business cycle of India, acting as a safety net, which goes with the intuition of Horvath (2018) and Marjit et al. (2023). Policymakers often view informality as a detriment to the development of emerging countries, but the ability of the informal sector to absorb shocks highlights its important role in India's economy. However, it must be remembered that informal productivity shocks do induce country risk shocks in India. This highlights a critical implication of our research: real interest rate fluctuations may stem from disturbances linked to the informal sector. Therefore, effective regulation of the informal sector is important. This brings us back to our original policy implication, i.e. policymakers need to consider the role of informal sectors instead of overlooking them.

Our results thus embody the paradoxes at the heart of the SDG agenda: while it acts as a community-driven buffer during economic shocks, it also introduces macroeconomic volatility, particularly through interest rate fluctuations. This duality mirrors broader SDG critiques—where well-intentioned goals can produce unintended consequences, such as deepening inequalities or creating systemic vulnerabilities. By integrating India's informal sector into macroeconomic modelling, my research shows the need for more inclusive and context-specific frameworks that bridge local realities with global development agendas. In line with the conference theme, Partnering for Progress, this study shows the importance of cross-sector partnerships between academia and policy makers to create sustainable, equitable policies that recognise the informal sector's importance role in advancing Agenda 2030.

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The Role of Interdisciplinary Hackathons to address Global Challenges: A Swansea University and WFGA (2015) Collaboration

Dr Samantha Burvill, Dr Fern Davies, Ms Beth Cummings, & Dr Kate Organ
(Swansea University)

Introduction

The incremental approaches adopted by business to address grand societal challenges are arguably insufficient for delivering at the scale and pace necessary to achieve the United Nations (UN) Sustainable Development Goals (SDGs) (Stubbs et al., 2022). The role of higher education business and management programmes is therefore invaluable to ensure that graduates are prepared to address global challenges of the future and contribute towards progress (UNESCO, 2024). However, as the complexity of 'wicked problems' intensifies and the trade-offs within existing frameworks become apparent, it is clear that the traditionally scattered and uncoordinated integration of global challenges in higher education will not suffice (United Nations, 2024).

Systematically embedding education for sustainable development (ESD) into business and management programmes is therefore an essential starting point to equip students with the knowledge required to tackle such challenges and ultimately contribute significant public and social value in the future (UNESCO, 2024). However, efforts need to go beyond simply extending knowledge of sustainable development and embedding within the curriculum. Instead, there is a need to adopt innovative pedagogic approaches to nurture the graduate competencies required by students to leverage complex problem solving, system change and transformation in society.

This research identifies practice-based approaches (Nick et al., 2014) and 'service learning' (Smith, 2008) as powerful and innovative forms of pedagogy for higher education business and management programmes to adopt. These approaches allow for the consolidation of academic and business contexts and connection of learned content to real world and complex problems such as the SDGs (Smith, 2008; Vogelgesang & Astin, 2000). The specific focus in this instance is on inter-disciplinary hackathons as an appropriate practice based pedagogic method to facilitate collaboration and partnerships between academia, industry, government and civil society.

The following abstract reflects on the findings of the Swansea University School of Management student sustainability survey and the first interdisciplinary Hackathon hosted by Swansea University Faculty of Humanities and Social Sciences in collaboration with the Commissioner's Office for the Well-being of Future Generations Act (WFGA) (2015).

Education for Sustainable Development

The School of Management at Swansea University prioritises education for sustainable development, aligned with the University's institutional commitments to make a difference, be socially responsible and to maintain a global outlook (Swansea University, 2025). Education for sustainable development can be defined as follows:

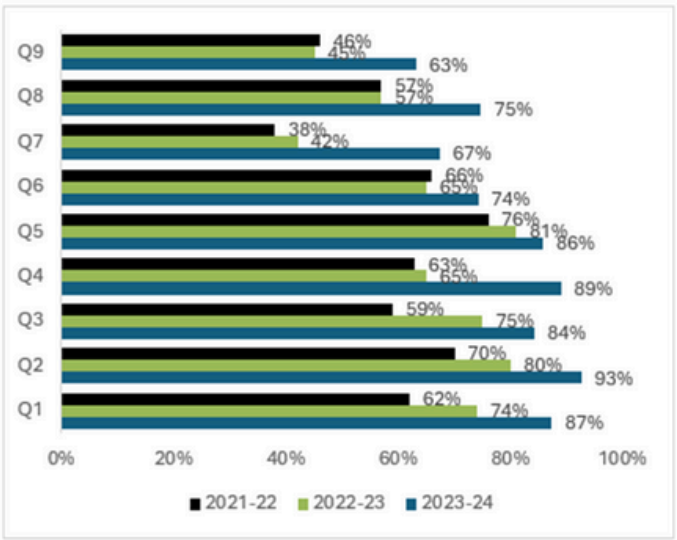
"ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. It is about lifelong learning, and is an integral part of quality education. ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society."
(UNESCO, 2021, p.8).

This definition aligns with that of Advance HE and QAA and suggests that education for sustainable development "equips learners with the knowledge, competencies and values to tackle interconnected global challenges and have a positive impact on economic, social and environmental sustainability" (Advance HE, 2024, p.2). The development of an interdisciplinary Hackathon in the Faculty of Humanities and Social Sciences promotes the ambitions of ESD and builds on previous collaborative relationships with industry and the WFGA (2015) Commissioners Office. It also responds to findings from the Swansea University School of Management student sustainability survey in an attempt to co-create innovative pedagogic approaches with students.

School of Management Sustainability Survey

In the student sustainability, ethics and climate action survey (n=190) distributed to Swansea University School of Management students in 2024 (see Figure 1), respondents were more likely to agree that they had learnt about these topics and that they are important to the industry or subject that they have studied, than to say that they understand how to act or consider the topic in relation to their expected field of work. For example, in relation to sustainability specifically, 86% of students agreed that s*ustainability is important to the industry or subject they had learnt about* (81% in 2022-23 and 76% in 2021-22) and 89% said that they *had learnt about sustainability in their programme of study* (65% in 2022-23 and 63% in 2021-22), showing a notable increase. This compares to 74% of students who *understood how to act sustainably in relation to their expected field of work* (from 65% in 2022-23 and 66% in 2021-22). These findings alone indicate an opportunity to focus on practical application of taught content, graduate competencies and interaction with industry to enhance student engagement with global sustainability challenges. These findings contributed to development of the Hackathon.

Figure 1: Student Sustainability Survey Findings (2021-2024)



Climate Change
Q9. As a result of my studies I understand how to consider climate change in relation to my expected field of work
Q8. Climate change is important to the industry or subject I have learnt about
Q7. I have learnt about climate change in my programme of study
Sustainability
Q6. As a result of my studies I understand how to act sustainably in relation to my expected field of work
Q5. Sustainability is important to the industry or subject I have learnt about
Q4. I have learnt about sustainability in my programme of study
Ethical behaviour
Q3. As a result of my studies I understand how to behave ethically in relation to my expected field of work
Q2. Ethical behaviour is important to the industry or subject I have learnt about
Q1. I have learnt about ethical behaviour in my programme of study

Graduate Attributes

When considering skills and competencies for the future the ability of students to be knowledgeable about sustainability, climate change and the SDGs and to be able to develop innovative solutions to key challenges is of critical importance (UNESCO, 2024). Swansea University places graduate skills and civic mission at the heart of its core mission and as such, just one of the attributes that a Swansea graduate will gain is the ability to address global challenges (see figure 2).

Figure 2: Swansea University Graduate Attribute - Addressing Global Challenges

G2: Address global challenges	Our curricula integrate knowledge of sustainability, climate change, and Sustainable Development Goals (SDGs), ensuring students understand their discipline's perspective on these global challenges. Graduates will acquire the skills to tackle global challenges in personal and professional contexts, and an awareness of international SDG contributions. The curriculum appeals to an ethically conscious student body and meets employer demands for sustainability-oriented competencies, producing globally and locally aware, ethically minded graduates ready to address environmental, economic, and social challenges.

Hackathons are therefore a key way in which this attribute can be developed, with collaboration and involvement between multiple stakeholders (in this case the office of the future generations commissioner for Wales, private sector and students). Hackathons can be described as "problem-solving workshops where individuals come together in teams to brainstorm solutions...responding to a defined challenge for organisations or business" (Mador & Baker, 2021, p. 2). They are a practice-based approach providing an opportunity to consolidate academic and business contexts to address real-world and complex challenges such as the SDGs or the WFGA (2015). This helps to create an engaging, realistic and innovative task for students, unlocking all six levels of thinking and learning from Bloom's Taxonomy of the cognitive domain (Anderson et al., 2001). Innovative pedagogic methods such as this help to nurture 'soft skills' such as problem solving, leadership, team work and communication (Advance HE, 2019) in alignment with the graduate attributes identified above. They also provide an opportunity to develop entrepreneurial skills (Avila-Merino, 2019), enhance inter-disciplinary collaboration and wider stakeholder engagement.

Hackathon Information

In this hackathon students were focusing on the seven wellbeing goals of the WFGA (2015). Wales became the first country to introduce well-being legislation with the WFGA, with public policy based on the foundations of well-being. This was created for public bodies and focuses on social, cultural, environmental and economic well-being, but is increasingly being focused on in private enterprise as well. It requires public bodies to think about the long-term impact of their decisions. The act covers seven well-being goals; a prosperous Wales, a resilient Wales, a more equal Wales, a healthier Wales, a Wales of cohesive communities, a Wales of thriving culture and Welsh language and a globally responsible Wales (see figure 3). Iceland and New Zealand have also followed this recently, aimed at promoting sustainable development. However, budget constraints are already potentially limiting the effectiveness of the WFGA and the Future Generations Commissioner's Office (FGCO). In their Statutory Estimate for 2024-25, the FGC noted that they do not have the subject specific expertise or time/resources to provide assistance to all those who are seeking to align themselves with the WFGA. The development of this hackathon provides a way in which awareness can be raised of the act but importantly provides a vehicle through which students can contribute to

the agenda of the act, enabling a toolkit of ideas to be developed that could potentially be utilised by the commissioners office and/or public, private and third sector with Wales and beyond. 35 students from various disciplines, levels of study and cultural background took part in the hackathon.

Figure 3: The Well-Being of Future Generations Act (Wales, 2015)

Hackathon Feedback

Quantitative and qualitative feedback was gained from 21 of the 35 students who took part in the hackathon with students rating their overall experience as 4.5/5. Only 5 out of the 21 students had heard of the WFGA (2015) prior to the event, suggesting that the hackathon enabled increased knowledge and awareness of the act. 19 out of 21 of the students identified that their involvement in the hackathon had inspired them to become more involved in sustainable development in the future. Students referred to the hackathon as "fun", "exciting" "challenging and innovative", "absolutely amazing" and that it "enabled unlocking of new skills". All students would recommend the event to others. In particular, students enjoyed the networking aspects that the hackathon provided, the new skills they gained as well as the collaboration and camaraderie that they developed with other stakeholders.

Conclusion

The role played by our future graduates will be critical and there is an urgent need to inspire and prepare students to enact sustainable development and tackle the complex global challenges of today, tomorrow and beyond. The interdisciplinary and collaborative Hackathon provided a valuable mechanism to do this, as supported by the student feedback. Moving forward, the ambitions are are create a pan Wales HE Hackathon to further increase knowledge of the act and SDGs, to increase collaboration, to develop additional solutions to grand challenges and to collate these into a toolkit that could be utilised by public, private and third sector alike.

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Samantha Burvill is an Associate Professor at Swansea University School of Management and is the Employability Lead for the Faculty of Humanities and Social Sciences. She holds a PhD in Business Growth from the University of South Wales and worked for a number of years in various positions within industry (from high tech to non-profit to healthcare) prior to starting a career in academia. Her research focuses on regional development, ecosystems (especially purposeful ecosystems), the Well-Being of Future Generations Act (Wales, 2015) and small to mediums sized businesses. Specifically, she explores the role of well-being, sustainability and ecosystems in regional development. She has a passion for collaboration and impact driven research that aims to make a clear difference to industry and policy. This translates into her teaching which focuses on preparing students to be change makers and leaders. She has co-edited a textbook looking at teaching cases in innovation and entrepreneurship in underexplored areas, has published numerous journal papers and conference papers, has won numerous awards for work focused on regional development and has led impact focused projects with industry. She is a regular higher education and business consultant and works with colleagues both nationally and internationally.

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Kate Organ is a Senior Lecturer in Marketing at the School of Management, Swansea University. Her specific teaching interests include marketing ethics and social responsibility. With keen interests in the environment, her research has not only examined the role of marketing practices to encourage more sustainable consumption behaviours, but she has also explored effective methods of planning for sustainable tourism development and the role that purposeful ecosystems could play in regenerative economies. With a keen interest in the role that students play in shaping our future, more recently her research has focused on examining effective pedagogic approaches to embed sustainable education in Higher Education courses.

The Sustainability Mindset: Managing the Unforeseen Paradox of Knowledge

Dr Karen Cripps (Oxford Brookes University), Dr Constantine Manolchev (University of Exeter), Emma Reuter, Quynh Dao (University of Neuchâtel – Switzerland), Simon Smith (Oxford Brookes University), Isabel Rimanoczy, & Beate Klingenberg (Sustainability Mindset Indicator)

Introduction

Rimanoczy's (2021) Sustainability Mindset Principles (SMPs) address the limitations of 'conventional' mindsets that have contributed to current planetary and social challenges. Each of the twelve principles is categorised within four content areas (see Figure 1): Ecological Worldview (Ecoliteracy, My Contribution), Systems Perspective (long-term thinking, Flow in Cycles, Both-And Thinking, Interconnections), Emotional Intelligence (Reflection, Self-Awareness, Creative Innovation), and Spiritual Intelligence (Oneness with Nature, Mindfulness, Purpose). This paper outlines their application within a business management module, providing pedagogic insights based on student data from the Sustainability Mindset Indicator (SMI).

Figure 1: The Sustainability Mindset Principles © Rimanoczy 2024

The principles align with leading competency frameworks for Education for Sustainable Development, such as sustainability competencies (UNESCO, 2017), Green Comp (Bianchi et al., 2022) and the Inner Development Goals (2023). A mapping of the principles against leading frameworks by Cripps and Smith (2023) illustrates a distinguishing attribute of the SMPs lies in their introspective focus, offering comparatively more emphasis than other competency frameworks on inner development and connection to nature through the content area of 'Spiritual Intelligence'. Each principle is described in terms of underpinning

learning dimensions that encompass knowledge (as cognitive attributes), skills and abilities (as behavioural attributes), and emotions/attitudes (as affective attributes). Thus, the SMPs enable a 'whole-person' learning pedagogy to transform personal and professional lives by enhancing understanding of the behaviours needed, specifically, those designed for responsible management (Cripps & Rimanoczy, 2023).

The Sustainability Mindset Indicator (SMI) is an online instrument that provides developmental insights on each of the 12 SMPs. Its empirical design is rooted in approaches such as positive psychology (Selgiman & Csikszentmihalyi, 2000), appreciative inquiry (Cooperrider & Witney, 1999), and transformative learning (Mezirow, 2016). A personalised feedback report provides actionable recommendations through reflective insight into ways of thinking, feeling, and acting. Educators also receive a group profile report that can be used to design teaching interventions alongside a pre-post report to measure any changes in students' responses following interventions.

This paper discusses some surprising results of students' SMI scores dropping between pre- and post-teaching interventions, which may have differing interpretations of the cause in terms of methodological approach and teaching constraints. Through an analysis centred on Torgersen and Saeverot's (2024) 'pedagogy of the unforeseen', which seeks to prepare students for unexpected and unforeseen events, this paper suggests the importance of dealing with learning tensions that may emerge as knowledge and self-awareness grows.

Methodology

The SMI was offered to students as part of the module on 'Developing Skills for Leadership and Employability', which stretches across two full semesters as part of an MSc in Business and Management programme. The majority of the students are from Asia. Two cohorts of students took the indicator at differing semester programme start points during 2023-2024. The funding for implementing the individual licenses to take the SMI was enabled through funding received in collaboration by Oxford Brookes University with the University of Neuchâtel (Switzerland) and Vienna University of Economics and Business (Austria) for the project 'A Collaborative Community for Sustainability Mindset Education'.

Students were invited to take the SMI voluntarily, with university ethical approval. This was connected to the summative assessment in which reflection on learning and personal growth on the 'sustainability mindset' is a mandatory component. Assessment through reflective writing tends to be new to many students from Asia, which is relevant when considering the results here. In cohort 1, students took the pre and post-SMI over the course of 2 semesters, at the beginning of the module (October 2023, n=28) and again towards the end (March 2024, n=26). When, unexpectedly, more funded licenses became available, cohort 2 was invited to take the SMI. These students, therefore, experienced a shorter pre-post period, taking it over one semester (October 2024 n=55 and again December 2024 n=45).

Following the first SMI results (cohort 1), the two principles, 'both-and thinking' and 'flow in cycles', showed comparatively lower scores in the group profile report and were therefore selected for foci in teaching interventions. Teaching constraints meant that only four teaching weeks were allocated, with two introductory teaching sessions (of 2 hours each) in semester 1 and two sessions (of 2 hours each) in semester 2 (focused on 'both-and', followed

by ‘flow in cycles’). Teaching design considered the three learning dimensions but was comparatively more focused on the cognitive dimension regarding teaching contact time. For example, the session on ‘both-and’ thinking was designed as follows:

- *Affective dimension*: To introduce the session, students shared personal tensions experienced (such as life and work balance).
- *Cognitive dimension*: Introduction to and design of polarity maps addressing tensions of cost excellence versus circular design for an organisation of their choice (thereby also implicitly addressing the sustainability mindset principle of ‘circular flow’).
- *Behavioural dimension*: Students were encouraged to practise awareness of opportunities to engage in both-and thinking, to apply polarity mapping to other modules, and to use this as a potential basis for their reflective assignment requirements.

Results

Across both cohorts of students, scores decreased in the measurement of ‘both-and’ thinking (-11% in cohort 1 and -13% in cohort 2). For flow in cycles, a decrease was also seen in cohort 1 (of -13%) but for cohort 2, scores increased (by 41%).

Cohort 1

Principle	Cohort 1 % Change	Cohort 2 % Change
Both-And	-11%	-13%
Flow in cycles	-25%	40%

Methodological limitations

Ideally, student participation in the pre-and post-completion SMI would match, but two students in cohort 1 and ten students in cohort 2 did not take the post. Both cohorts received the same teaching interventions, but cohort 2 had already received some of them before being invited to take the SMI and was, therefore, measured over one semester rather than two. Therefore, cohort 2 may have been more familiar with what was being asked of them in completing the indicator.

Discussion

Despite the focused interventions on the ‘both-and’ and ‘flow-in-cycles’ dimensions of the SMI, the scores of both cohorts decreased, and, at least on the surface, it may be concluded that the interventions were not fully successful. Focus is given here to the principle of 'both-and' thinking, which dropped across both data sets. This may be linked to the inherent complexity and/or paradoxical tensions arising from its teaching. 'Both-and' thinking may require a systemic teaching approach. For example, its cognitive, affective and behavioural dimensions may need to be developed through learning inputs from other modules so that

students can start making connections across different discipline domains. In the most current iteration, students have been explicitly encouraged to use polarity mapping in other modules, which has been well received by students.

Paradoxically, following teaching interventions, students may objectively know more about 'both-and' thinking, but subjectively, they feel more unsure of what they know, as they have become more aware of a breadth of perspectives. This aligns with the model of 'learning competence' in moving from 'unconscious incompetence', in which they may initially over-estimate behaviours and attitudes to 'conscious competence', in which they are much more aware of the complexity inherent in a sustainability mindset. Each principle opens up awareness of feelings, behaviours and knowledge. With further reflection and engagement in nurturing a sustainability mindset, they may move to the final stage of 'unconscious competence' in which they naturally draw on a balance of all learning dimensions.

Furthermore, with limited lecturer-student interaction, particularly when taking the assessment at the beginning of the module, students may feel a sense of the 'unknown purpose' of the indicator and feel a need to give the 'right' answer. As learning progresses and students become more comfortable, a greater feeling of 'psychological safety' may lead to more 'honesty' in self-reflection. This study, therefore, raises the question of how to support students in becoming objectively aware of strengths and personal attributes without cognitive bias.

The 'pedagogy of the unforeseen' (Torgersen and Saeverot, 2024) points to a possible way forward. As a framework advocating a more 'existential' approach to education, it aligns not only with the cognitive but also the affective and behavioural/capability dimensions of Rimanoczy's (2021) SMP. Specifically, this pedagogy aims to prepare students for unforeseen and unexpected events by going beyond traditional learning outcomes and seeking to develop complementary capabilities such as creativity and adaptability. By creating a space of psychological safety, this pedagogy focuses on learning and building the ability to feel comfortable with 'not yet knowing'. Importantly, it recognises that the tensions and paradoxes we observed may emerge when learning is widened to engage emotions and capabilities and students' cognitive rationality.

Consequently, the pedagogy of the unforeseen suggests that exposing students to learning that develops their resilience, adaptability, and creative capability may clash with structured learning approaches. Accounting for individual learning subjectivity may also make it difficult for educators to align their and students' interpretations and positionality towards complex concepts. For example, an educator's interpretation of 'both-and' thinking teaching activities may inherently constrain students' thinking through pre-planned and time-limited learning activities. The study has highlighted the complexity inherent to teaching the principle of 'both-and' thinking in a way that supports students' effective self-awareness of managing learning tensions that balance meaningful students' self-perceptions within a context of assessed learning outcomes. The decrease in scores also underlines the need for educator resilience and adaptability to embrace complexity and continue innovating despite unexpected results!

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Where is the 'Big Manual' for Academic Boundary-Work? Institutional Stances on Policy-Maker Utility

Dr Nicola Barron, Prof. Mark Palmer, & Dr Lucas Stocco (Queen's University Belfast)

Abstract

At a time when big goals have become central to government policy and industrial strategies in the last decade or so, and grand challenge narratives pervade academic debates, this research aims to make four contributions. First, to brace an available evidence base, presently notable for its simplistic framing of small and big challenges, and articulate ways that Business Schools can contribute in more expansive ways towards policy practice. Second, to articulate a three-dimensional diagrammatic representation of the institutional scaffolding work in policy practice, drawing attention to the avenues for fruitful tall ontological engagement – 'big picture' – through interconnecting spheres, ugly scaffolding work and multi-modal vocabularies. Third, to catalyse and shift the debate forward, addressing the missing industrial policy symbiosis. Finally, to draw out lessons from our multi-stakeholder initiatives (MSIs) in policymaking utility of academic boundary-work in policy environments. We provide illustrative insights based on our experience of working in the geothermal energy transition in both Northern Ireland and Belize to reflect upon policy-maker utility.

Introduction

Academics, policymakers and practitioners alike have adjusted to complex and, as yet, not fully understood and documented ways of doing 'grand challenges' [1]. That adjustment has taken place on top of the incomplete understanding of the consequences of two significant institutional forces. Firstly, the progressive emphasis of academic research towards these grand challenges and related 'big policy' challenges, particularly those articulated by the United Nations Sustainable Development Goals (SDG 7: Affordable and Clean Energy and SDG 13: Climate Action, for example) has had a marked effect on institutional efficacy, but also the institutional stance of institutions on how to engage with 'grand challenges.' Most academic work has been organised and situated in the narrow confines of the ontology of disciplines and related domains of work. Secondly, of the decade or so long emphasis on 'grand challenges', mapping the different strands of this work and how different expertise networks of professions and related outputs link together remains relatively limited and sparse [2]. Arguably there remains a simplistic idea about how smaller projects and big policy come together and are represented [3].

This conference paper discusses these challenges. The approach developed here is different to generic academic-practitioner studies in that it considers this puzzle as part of the institutional cognitive dynamics, particularly the ugly institutional scaffolding work. Particularly pressing, we argue, is the need for a usable schematic framework for identifying and drawing together the institutional scaffolds. We also draw on our experiences working with multi-stakeholder initiatives (MSIs) orientated toward Sustainable Development Goal 7, specifically the geothermal market, its actors, and its devices [4], [5], [6]. Guided by the autoethnographic narratives, we reflect on our MSI organising and engagement work and extrapolate some lessons on policy-maker utility.

Green R&D projects as an example

This paper reflects on the peculiar situation in which the two authors, along with other colleagues, have undertaken a range of multi-stakeholder initiatives (MSIs), which brought us into the company of different professions, particularly that of policymakers. In this engagement, the MSIs adopted a multi-modal vocabulary that sought to remove jargon, prompt and nudge reflection through 'Think Box' formats (see Palmer et al. [6]), pique interest with visualisation, colour and human interests, support with decision support tools, frameworks and models (see Palmer et al. [4], [5], [6]), and presenting to policy-makers with flanking PowerPoint presentations and institutional scripts to support evidence-based policymaking. For example, bringing together multi-stakeholders at *#Geothermal Energy Week* in June 2022, a one-day workshop entitled *Building the Geothermal Energy Sector in Northern Ireland* in July, 2023, and a week-long set of activities at *Geothermal Week Belize* in November 2024, which involved plenary and panel discussions, presentations, round-table question-led dialogues, fieldtrips across the supply chain and showcasing geothermal installation at our Business School. The workshops also provided an opportunity to discuss project updates and pressure points felt by practitioners in an open discussion format and discuss ideas for developing R&D projects.

No 'big manual' for academic boundary-work

Perhaps acutely, we had not been trained or prepared for the sensitivities associated with this form of academic boundary-work and in policy-maker utility environments. There was no 'big manual' for this work and threading carefully in the delicate tightrope balance of being sufficiently independent and staying 'out of it', whilst also 'staying part of it'. As this paper attests, we had naively assumed 'good faith' in sharing our work with the presumption that it would be fully acknowledged and cited, embracing the insights and actions, but underestimated the quest for authority and control, or indeed underestimated the isomorphic forces and the resulting 'lekking environment' with competing academics seeking to 'crowd in' and appropriate our initial funding success and also in the appropriation of key terms and words in search of reshining the limelight onto their publications and expertise. This territoriality and demanding social interactions in competing and protecting intellectual property is rarely acknowledged in market transition studies.

Lessons learned in academic-policy-maker boundary-work

This paper concludes by drawing out lessons and implications for academics and policymakers.

1) Small institutional scaffolds work towards big industrial policy

Scaffolding work across ecosystems is not easy as each system has their own dynamics [7], [8]. Breaking down stubbornly persistent localised stances requires scaffolding work at institutional places and spaces of ecosystems linkages and relational nexus spaces.

2) Creating symbiosis is more than the sum of scaffold links

'Big picture' symbiosis refers to way that the relationships fit into larger ecological systems and contribute to the overall health and stability of ecosystems.

3) Multimodal vocabulary is needed to transcend big policy and small projects

This research points to the question, what institutional stance should adopt when considering net zero change? Is it more beneficial to take a more localised view? Or which actors should adopt a big policy stance? Or would it be more beneficial to hold a neutral stance? Can holding a neutral stance or reserving judgement 'in the meantime' benefit policymaking?

Conclusion

More understanding is needed in terms of academic boundary-work and the way that expertise is enacted. In this paper, we used an auto ethnographical [9], [10] approach to uncover big-small policymaking practice. It is increasingly important that academics reflect on their experiences of working in policy environments. In practice, academic-policy interactions are much more complex. Our experiences of organising multi-stakeholder events and visits can bring novel insights into policymakers' deliberate interventions, asserting spheres of interconnections. How much of the ugly scaffolding work remains intact to draw lessons from, or whether the scaffolding connections are quickly taken down remains to be seen. Almost seventy years ago, Theordore Levitt suggested we attend to the long-run positions, look beyond the immediate and taking a broader perspective. Heeding this wisdom brings attention to the interplay with the small and big picture symbiosis in academic boundary-work.

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