

## Education for Sustainable Development (ESD) related research Plymouth University 2010-2014

Date	Project title	Description	Outcomes/ impact	Staff
2014	<b>Through others' eyes: A survey of visitor values at the NMA</b>	This research collaboration between Plymouth University and the National Marine Aquarium (NMA) will investigate values of visitors who currently engage with the conservation education resources and exhibits of the NMA. This initial research study will inform the proposed future collaboration between PU and NMA helping to reveal the complexity of the challenge behind the NMA behaviour change and participant engagement agendas.	Research commenced May 2014	Christine Boomsma, Michelle Virgo, Paul Warwick, Sabine Pahl
2014-15	<b>Making a difference: an interdisciplinary social engagement project</b>	Medical students' engagement with community-health practices in Devonport, Plymouth.	Research commenced March 2014	Richard Ayres, Maria Tighe
2014 - 15	<b>Different Languages, Shared Goals? Exploring the Potential for Merged Pedagogies in Enterprise Education and Sustainability Education</b>	Identification and examination of the synergies between Enterprise Education (EE) and Sustainability Education (ESD) and evaluation of the potential for a merged pedagogical approach, critically informed by best practice in both fields.	Research commenced March 2014	Lynne Wyness, Paul Jones
2014-15	<b>Mind the gap: Chinese perceptions of sustainability and implications for teaching business and economics</b>	This project aims to explore the similarities and differences between the perceptions of sustainability held by Chinese and UK lecturers, as well as the potential impact on teaching of business and economics.	Research commenced March 2014	Jennie Winter, Debby Cotton
2013-14	<b>Collaborative Leadership for Sustainability</b>	Action research with students and community members aiming to understand how to optimise the core features of identities for sustainability in a collaborative way.	Only recently completed, but will result in a couple of journal papers at a minimum	Enrico Wensing (George Mason University, VA) Victoria Hurth,

				Michelle Virgo
2013	<b>Review of teaching practice and content for sustainability across the Tourism &amp; Hospitality curriculum</b>	The findings demonstrate that a lot of activity is already underway across the School especially in some programmes but there is scope to co-ordinate activity better, improve content, enhance practical skills, and embed and integrate further into present teaching practice.	Final report to Head of School. Academic paper to follow.	Emma Whittlesea, Sheela Agarwal
2013-14	<b>Students' and staff experiences of a new business module BUS 229 (Shaping the future: creating sustainable organisations)</b>	Participatory research that aims to engage students more actively in the module evaluation process, to support staff to refine, improve, and celebrate their practice, to provide material for a sustainability education case study, and to deepen the evidence base for ESD-activity in Plymouth University.	Ongoing research due to finish July 2014	Paul Warwick, Lynne Wyness
2012-	<b>Win Win: Saving Cost and Carbon – Sustainable Waste Management in Healthcare</b>	A programme of research which will lead to an understanding of current practices and the pressures associated with sustainable management of waste. Based on data from interviews with staff involved in healthcare waste management, a whole systems pathway has been developed, which identifies key drivers and trigger points for change interventions. Ongoing survey of nurses' attitudes to sustainability (200+ responses to date). Survey has been translated into Spanish and German and responses collected from colleagues in nursing schools at Jaen(Spain) and Esslingen (Germany) and will be given to nurses in Maastricht (Holland).	Research ongoing. Outcomes to date: Sustainability skills information embedded into nursing undergraduate and curricula and these sessions have evaluated extremely well. Presented to European CleanMed Conference, Nurse Education Today, School of Nursing, Worcester University. Observation of nursing skills sessions embedded into 3D Design curricula leading to design of a range of sustainability products and a teaching pack. Curriculum mapped for UG and PG students to see where and how sustainability is and can be introduced. ISSR New Horizons Report available: <a href="https://www1.plymouth.ac.uk/research/issr/Documents/Win%20Win%20-%20Saving%20Cost%20and%20Carbon.pdf">https://www1.plymouth.ac.uk/research/issr/Documents/Win%20Win%20-%20Saving%20Cost%20and%20Carbon.pdf</a>	Janet Richardson (lead), Jane Grose
2012-13	<b>'Stepping Out': Enabling Community Access to Green Space through Inter-disciplinary Practice Learning</b>	This paper presents a small-scale action research study of public health nursing and social work students' practice-based learning. The study aimed to identify collaborative opportunities to improve access to green space for community residents in Plymouth, in the	Tighe, M., Whiteford, A. & Richardson, J. (2013). 'Stepping Out': Enabling Community Access to Green Space through Inter-disciplinary Practice Learning in Plymouth, UK. <i>International Journal of Practice-based</i>	Maria Tighe, Andrew Whiteford, Janet Richardson

<p>in Plymouth</p>	<p>United Kingdom (UK). The student experience was nested within 'Stepping Stones to Nature' (SS2N), a city-wide initiative enabling local residents' access to green space. A local health impact assessment (HIA) provided an over-arching partnership framework. The pedagogical aim was for students to learn and work together to make a real contribution to people's lives.</p>	<p><i>Learning in Health and Social Care</i>, 1(2), 8-22.  <a href="http://journals.heacademy.ac.uk/doi/abs/10.11120/pblh.2013.00013">http://journals.heacademy.ac.uk/doi/abs/10.11120/pblh.2013.00013</a></p>	
<p><b>2012-13</b>    <b>Using On-line Role Play to Promote Soft Skills Development for Social Enterprise (Leonardo TOI Fund)</b></p>	<p>The S-Cube project sought to spread the use of on-line role play for providing a training experience to enhance the soft skills of individuals working within social enterprise settings. The project involved the use of a state-of-the-art e-learning approach to enhance 'learning by doing' practice for soft skills training.</p>	<p>O'Byrne, D. &amp; Moizer, J. (Eds.) (2014) <i>S-Cube Project (S3): Training Soft Skills In Social Enterprises Using Virtual Environments for Role Play</i>. University of Plymouth Press: Plymouth [e-book].  O'Byrne, D., Lean, J., Moizer, J., Walsh, P., Dell'Aquila, E. and Friedrich, R. (forthcoming) 'Social Enterprise in the European Union: A Review of Policy' <i>Social &amp; Public Policy Review</i>.  Moizer, J. (2013) 'Soft Skills Development in Social Enterprises: An Online Role Play Simulation Approach.' Keynote presentation at the Block Magic Project, Rome, Italy</p>	<p>Jonathan Moizer, Jonathan Lean, Elena Dell'Aquila (with Cork Institute of Technology &amp; GePros, Germany)</p>
<p><b>2007-13</b>    <b>Embedding ESD in Further Education Initial Teacher Education</b></p>	<p>I led a co-operative inquiry research project to embed ESD into our PGCE/Cert Ed programmes for the Further Education Sector. I have recently carried out research to explore the influence of this on our student teachers and colleagues both professionally and personally.</p>	<p>Summers D. (2013) Education for Sustainable Development in Initial Teacher Education: From Compliance to Commitment - Sowing the Seeds of Change. <i>Journal of Education for Sustainable Development</i>. 7:2, pp. 205-222  Summers D. and Turner R. (2011) 'Outside the green box: embedding Education for Sustainable Development through co-operative inquiry.' <i>Educational Action Research Journal</i>, 19:4, pp. 453-468.  Summers D. (2010) 'Embedding Education for Sustainable Development in Initial Teacher Training in the Lifelong Learning Sector.' <i>Teaching in Lifelong Learning</i>, Vol 2 (1), 35-46.  Martin K., Summers D. and Sjerps-Jones H. (2007) 'Sustainability and teacher education.'</p>	<p>Denise Summers</p>

			Journal of Further and Higher Education, 31(4), 351-362.	
2012	<b>Cultures of sustainability in secondary schools (PhD)</b>	Three case-study ethnographies of local secondary schools' engagement with sustainability.	O'Sullivan, C. (2013) 'Researching the Sustainable School: the ethics of an ethnographic study', in Lee, E, Blackmore, C & Seal, E (eds). <i>Research Journeys: revealing the doctoral process</i> . Newcastle upon Tyne: Cambridge Scholars Publishing.	Ciaran O'Sullivan
2012	<b>Supporting Entrepreneurship Education in East Africa (DfID-funded/managed by ISSR)</b>	Bringing entrepreneurship education into the curriculum as part of poverty alleviation programme and supporting innovation in micro enterprises.	Kaijage, E. & Wheeler, D. (2013) Supporting Entrepreneurship Education in East Africa: Report for Presentation to Stakeholders.	David Wheeler, Robert Newbury, Lise Hunter (with University of Nairobi)
2011-12	<b>Communicating carbon through images: opportunities and challenges (CSF)</b>	The aim of this research was to evaluate the potential for carbon visualisation tools and materials in enabling people to make sense of carbon. The research aimed to explore the impact and effectiveness in Carbon Visuals' images in raising knowledge and understanding of carbon and carbon footprints, and their impact on perceived potential for future behavioural change.	Publications pending.	Stephen Sterling, Helen Lawson
2011-12	<b>Energy Literacy in Higher Education (PedRIO-funded research)</b>	Large scale quantitative survey of HE students' energy literacy	Publications pending	Debby Cotton, Wendy Miller, Jennie Winter, Stephen Sterling, Ian Bailey
2011-12	<b>Environmental Activism and its influence on sustainability education: experience at two British universities (PedRIO-funded research)</b>			Roger Cutting, Alun Morgan, Larch Maxey, Robert Cook and Sukart Honey
2010-11	<b>Values-led education for sustainability: crossing boundaries (PedRIO-funded research)</b>			Paul Murray, Simon Ashby, Richard Dawe

2010-11	<b>Investigating innovative pedagogies at Schumacher College and their wider potential in HE (PedRIO-funded research)</b>	The study explored the nature and application of transformative learning as a pedagogical approach to advance change towards sustainability at Schumacher College.	Blake, J., Sterling, S. & Goodson, I. (2013) 'Transformative Learning for a Sustainable Future: An Exploration of Pedagogies for Change at an Alternative College', <i>Sustainability</i> , 5. <a href="http://www.mdpi.com/2071-1050/5/12/5347">http://www.mdpi.com/2071-1050/5/12/5347</a>	Joanna Blake, Stephen Sterling, Ivor Goodson (University of Brighton)
2010-11	<b>Enhancing project-based learning in sustainable building by incorporating learning technology (PedRIO-funded research)</b>	Development of a project sub-site on SharePoint that makes use of a number of learning technologies including wikis, discussion boards, intranet and folders. This sub-site provides a platform for students to communicate within their groups and with their lecturers, and to engage with their allocated industry mentors. Students can access good practice case studies and categorised information sources.	Pan, W. & Garmston, H. (2012) 'Enhancing project-based learning in sustainable building by incorporating learning technology'. Paper presented at 48th Annual International Conference of the Associated Schools of Construction. Birmingham School of the Built Environment, UK, 11-14 April. Link to paper: <a href="http://ascpro.ascweb.org/chair/paper/CEUE220002012.pdf">http://ascpro.ascweb.org/chair/paper/CEUE220002012.pdf</a> Pan, W., Murray, P., Cotton, D. and Garmston, H. (2012) Integrating Research-informed Teaching into Sustainable Construction Education. <i>Journal for Education in the Built Environment</i> , 7:1, pp. 94-117. <a href="http://cebe.cf.ac.uk/jebe/pdf/WeiPan7(1).pdf">http://cebe.cf.ac.uk/jebe/pdf/WeiPan7(1).pdf</a>	Wei Pan
2010-11	<b>Transformative learning for sustainability in HE: Exploring diverse student experiences (PedRIO-funded research)</b>	Explored student experience of transformation for sustainability in two leading sustainability HEIs	Winter, J., Cotton, D. & Grant, V. (2012) 'Experiencing transformation: A student Perspective' <i>Sustainable Development at Universities: New Horizons</i> . Frankfurt: Peter Lang, pp. 85 – 97 'Experiencing Transformation: A Student Perspective' (2012) presented at UN Conference on Sustainable Development, Rio de Janeiro. 'Transformative learning in sustainability: Student and staff perspectives' (2013), paper presented at ICED (International Consortium for Educational Development) conference, Bangkok, Thailand. Final Report (2012) An Institutional	Jennie Winter, Debby Cotton, Viv Grant

			Comparison of an Academic and Student perspective on Transformation within Sustainability, PedRIO.	
2010-11	<b>Evaluating novel pedagogies for ESD and Evaluating value-training for sustainability</b>	Developing new methods of engaging learners of all types with sustainability at the personal and professional level	Murray, P. (2011) <i>The Sustainable Self</i> , Earthscan.	Paul Murray
2010-11	<b>Development of a student resource for problem-based learning in Ecological Economics informed by student experience and reflection (PU TFAS)</b>	To develop a student resource to improve the learning and teaching experience for problem-based learning in Ecological Economics.		Lynda Rodwell
2009-10	<b>A Sustainable Campus? Students' Perspectives of Informal Learning about Sustainability (PU TFAS)</b>	Got students to make videos of sustainability on campus	Winter, J. & Cotton, D. (2012) 'Making the hidden curriculum visible: sustainability literacy in higher education', <i>Environmental Education Research</i> , 18:6, pp. 783 - 796 Cotton, D., Winter, J., & Bailey, I. (2012) 'Researching the hidden curriculum: intentional and unintended messages' <i>Journal of Geography in Higher Education</i> , (IFIRST), pp. 1 - 12	Jennie Winter, Debby Cotton