

## The 11<sup>th</sup> eSTeEM Annual Conference: Scholarship Success Stories – Innovation Through Community

11<sup>th</sup> – 12<sup>th</sup> May 2022 via MS Teams

### PROGRAMME

#### Day 1: Wednesday 11<sup>th</sup> May 2022

Time	Session	Online Room
10.45-11.00	<b>Registration and Coffee</b> Grab a cuppa and have a chat with colleagues before the conference gets underway	Medlar and Juniper
11.00-11.10	<b>Welcome and Introduction</b> Trevor Collins and Mark Jones, eSTeEM Directors	Hub Lecture Theatre
11.10-11.15	<b>Welcome Address</b> Nicholas Braithwaite, Executive Dean, STEM Faculty	Hub Lecture Theatre
11.15-11.45	<b>Day One Opening Keynote Presentation</b> David White, Head of Digital Education and Academic Practice, University of the Arts London  <b>You can't repeat the past: Community and placemaking in the distributed university</b>  There has been much discussion of 'what we should keep' from our experiences of teaching and scholarship during the pandemic. However, this approach implies an immutable version of 'university' which can always be extended. In this talk I will argue that, much like the Great Gatsby, we can't repeat or recreate the past but must collectively develop new modes of working and connecting. To this end, I will propose methods of placemaking and facilitating community which do not draw on building-based paradigms. Methods which unapologetically lead with the digital,	Hub Lecture Theatre

	and positively reposition the value of our physical estate in an era where 'online' is the primary location for scholarly activity.			
<b>11.45-12.00</b>	<b>Break and Posters</b>			
<b>12.00-13.00</b>	<b>Parallel Session A: Short Oral Presentations – Equality, Diversity and Inclusion</b>			<b>Room A</b>
<b>Chair: David Sharp</b>	Louise MacBrayne, Jennie Bellamy, Elaine McPherson and Angela Richards	Black student experience on S112: improving a Level 1 STEM module	Pass rates for Black S112 students are lower than students from other ethnicities, despite completion rates closer to the module mean. This presentation will report preliminary findings from focus group discussions with former S112 Black students and an intersectionality study considering relationships between ethnicity and other socio-economic factors.	
	Andrew Potter, Diane Butler, Clem Herman, Nicole Lotz, Daphne Chang and Peter Wood	STEM Inclusive Curriculum Project	This talk will detail the findings of Phase 1 of the STEM Inclusive Curriculum Project. Using the Inclusive Curriculum Tool, 14 STEM modules were reviewed by Associate Lecturers to identify good practice and areas for improvement with regard to equity, diversity and inclusion.	
	Fidele Mutwarasibo, Tracie Farrell, Miriam Fernandez, Martin Hlosta and Vaclav Bayer	Closing the Awarding Gap	Closing the awarding gap is an ethical responsibility for UK Universities. In this session, we will be sharing some mixed-methods research into the awarding gap in the STEM faculty, and presenting critical perspectives from Black students and diverse educators at the OU.	
<b>12.00-13.00</b>	<b>Parallel Session B: Short Oral Presentations – Supporting Students &amp; Assessment and Feedback</b>			<b>Room B</b>
<b>Chair: Helen Lockett</b>	Gemma Warriner and Andy Diament	Improving students' engagement with Python	We surveyed level 1 students on their experience of learning Python, for many their first programming experience. We found that many students were looking at other resources around the internet and so the support on the Study site was improved, in line with what students reported they found difficult.	

	Karen Kear, Helen Donelan and Jon Rosewell	Synchronous Online Learning: Addressing the Challenges of Student Engagement	Online synchronous tutorials have been vital in replacing face-to-face tutorials during the pandemic. However, there is often a lack of active participation by students. We present student survey data from a pan-university project investigating this issue, with the aim of improving the online tutorial experience for students and tutors.	
	Jenny Duckworth and Harriet Kopinska	Tutor and student experiences of marking grids for assessment on a Level 3 interdisciplinary module	SDT306 (Environment: Responding to Change) uses marking grids to give feedback against Learning Outcomes by applying criteria. Our project evaluates student and tutor experiences of this marking grid approach, through the analysis of quantitative (survey) and qualitative (interview) data. We will discuss our preliminary findings and their implications	
<b>13.00-14.00</b>	<b>Lunch and Posters</b>			
<b>14.00-15.00</b>	<b>Parallel Session C: Short Oral Presentations – Academic Community, Employability and Supporting Students</b>			<b>Room A</b>
<b>Chair: Julie Robson</b>	Cath Brown and Susan Pawley	Building a sense of community through social activities on MST124	Research shows a strong sense of community can make a real difference in students' retention and success. But this is harder at a distance! In this project, we are running a range of social activities in a large population level 1 module (MST124) to develop community and analysing the results.	
	Janet Haresnape	Employability skills gained through engagement with practical investigations	A survey of OU Life Science students who had undertaken one particular practical investigation found many students had developed and progressed their practical and problem-solving skills, but few had equated these with employability skills. This session will explore what more can be done to make the skills developed more obvious.	

	Martin Braun, Ian Bates, Keith Carter, Joanne Holford and Katherine Kirk	Investigating how to enhance the idea generation process for academic projects by engineering students	OU undergraduate project modules require the student to develop a project idea. Is it possible to support this ideation process with a toolkit to make subsequent tutor-student discussions more effective? This session will discuss this idea.	
<b>14.00-15.00</b>	<b>Parallel Session D: Workshop/Demonstration – Equality, Diversity and Inclusion</b>			<b>Room B</b>
	John Butcher and Rehana Awan	How do we talk about race and mental health?	This discussion session will present the findings from a scholarship project which gathered together the voices of five Black African and Black Caribbean students to understand how the OU can better support Black students with mental health conditions to seek support and declare a disability.	
<b>15.00-15.15</b>	<b>Break and Posters</b>			
<b>15.15-16.15</b>	<b>Innovation Through Community: A Panel Conversation</b>			<b>Hub Lecture Theatre</b>
<b>Chair: Mark Jones</b>	This session will explore innovation in teaching and learning through the experiences of several established eSTeEM project leaders. The focus of this session will be to reflect on the interactions within and between stakeholder communities in fostering innovation, carrying out scholarship, and in driving impactful change of practice. Panel members will offer their reflections on how various communities enable effective scholarship and suggest ways in which we may strengthen collaborations, enhance interactions, and further develop a shared sense of common purpose.			
<b>16.15-16.45</b>	<b>Afternoon Tea and Networking</b> Colleagues are invited to join other conference delegates to reflect on day one and look ahead to day two.			<b>Medlar and Juniper</b>
<b>16.45</b>	<b>Close of Day One</b>			

## Day 2: Thursday 12<sup>th</sup> May 2022

Time	Session			Online Room
9.45-10.00	<b>Registration and Coffee</b> Grab a cuppa and have a chat with colleagues before day two of the conference commences			Medlar and Juniper
10.00-11.20	<b>Parallel Session E: Short Oral Presentations – Supporting Students &amp; Assessment and Feedback</b>			Room A
<b>Chair: Sally Jordan</b>	Rachel Hilliam, Carol Calvert, Emma Steele and Di Haigney	Statistical anxiety: will qualification focussed student support help?	Can qualification-based support help reduce statistical anxiety? This talk will outline approaches we have taken to provide tailored qualification support for students who study one statistics module and how the evaluation may suggest this reduces statistical anxiety. To evaluate this further we intend to tailor existing statistical anxiety rating scales.	
	Cath Brown and Catherine Halliwell	Extensions - student use, impact, and implications	We investigated students' use of extensions and their impact on success. The data highlighted module differences, early extensions as a potential warning sign, and highlighted that disabled students needed proportionately twice as many extensions.	
	Chris Gardner, Michael Bowkis and Alexis Lansbury	Early Start for TM470 project students	Students on IT/computing named degrees complete a compulsory project at the end of their studies (TM470) but face challenges completing the module if they have had a break in study. This project aims to provide an insight into the effectiveness of early start interventions to aid retention and progression.	
	Karen New and Fiona Moorman	L markers on TMAs: better late than never?	An L-marker may be applied to a TMA where a student submits late without (or beyond) an agreed extension. Reviewing data from 2018B to 2021J presentations, this project explores L-marker use in modules within LHCS, attempting	

			to explore issues of consistency, fairness and transparency. Preliminary results will be explored.	
<b>10.00-11.20</b>	<b>Parallel Session F: Short Oral Presentations – Technologies for STEM Learning, Equality, Diversity and Inclusion &amp; Learning Design</b>			<b>Room B</b>
<b>Chair: Jonathan Nylk</b>	Ann Grand, Sarah Davies, Trevor Collins and Eileen Scanlon	Alternative fieldwork, "real-world" communities	Fieldwork has a respected place in education at all levels but for many different reasons, participation is declining. Technology-based analogues offer people who cannot access traditional fieldwork a chance to experience it but to what extent can these alternatives replicate and extend the engagement offered by real-world trips?	
	Mustafa Ali, Magnus Ramage, Zoe Tompkins, Steve Walker, Ray Corrigan, Clem Herman and Andy Hollyhead	Milestones and Challenges in Decolonising Computing	Members of the Critical Information Studies (CIS) research group in the School of Computing and Communications are undertaking an exploratory project entitled 'Decolonising Computing – Resources for Educators'. This presentation will report on milestones achieved, various internal and external challenges encountered thus far, and propose ways to address them.	
	Mark Hall and Soraya Kouadri Mostéfaoui	Infrastructure for an Online Computing Lab	The presentation gives an overview over the Modern Container-based Learning Interface and Delivery Infrastructure project, which has developed a stable and cost-effective infrastructure for providing an online computing lab to a number of modules.	
	Tom Olney, Carlton Wood, Anne Higson and Alison Edwards	Evaluating the Impact of Implementing Learning Design Approaches in STEM over 4 Years (July 2017 – July 2021)	This presentation will present the findings of an eSTEeM study designed to evaluate the impact of arrangements to support module teams in implementing learning design in STEM over a period of 4 years. Impacts on practice, product	

			and process plus four recommendations for future arrangements will be presented.	
<b>11.20-11.35</b>	<b>Break and Posters</b>			
<b>11.35-12.35</b>	<b>Parallel Session G: Short Orals Presentations – Equality, Diversity and Inclusion</b>			<b>Room A</b>
<b>Chair: Frances Chetwynd</b>	Susan Pawley and Sally Organ	Exploring the extent of maths anxiety within the STEM faculty	We will present results quantifying the extent of maths anxiety and resilience across core OU introductory modules in STEM, together with more qualitative insights from student interviews. The survey results reveal high levels of maths anxiety overall, with variations between disciplines and key student characteristics.	
	Lisa Bowers, Elouise Huxor and Theo Philcox	AL Disability Champions; Reflections and actions of a peer-peer disability support group	‘AL Disability Champions’ developed and explored the opportunities of the provision of a peer-peer disability teaching group. This project aimed to offer U101 (Design thinking) tutors timely teaching support for their students who were increasingly presenting with complex learning needs.	
	Nicole Lotz and Muriel Sippel	Embracing the voices of the marginalised learners with a declared mental health disability	Persistent low pass rates for students with declared mental health disabilities across Design informed an eSTEEem project with the need to understand the study experiences of these marginalised learners. We discuss how the insights gained from deep qualitative data inform the development of more inclusive learning designs for project-based learning.	
<b>11.35-12.35</b>	<b>Parallel Session H: Workshop/Demonstration</b>			<b>Room B</b>
	Trevor Collins	Birds of a Feather Conversations: Generating New Project Ideas	The aim of this workshop is to provide an opportunity for you to share your scholarship experiences, generate ideas for projects, and identify potential collaborators. Within eSTEEem we hope to draw upon this discussion to help	

			guide our future calls for proposals and plans for impact.	
<b>12.35-13.30</b>	<b>Lunch and Posters</b>			
<b>13.30-14.00</b>	<b>Day Two Closing Keynote Presentation</b>			<b>Hub Lecture Theatre</b>
	<p>Cate Cropper, Lecturer, Central Teaching Laboratory, University of Liverpool</p> <p><b>The importance of Community in developing the delivery of online labs during the COVID-19 Pandemic</b></p> <p>During the COVID-19 pandemic, universities across the world were required to rapidly replicate their teaching and learning online. Reflecting on this for the first time in two years, this presentation will draw out the importance of community and collaboration in successfully addressing the challenges faced in delivering laboratory teaching during the pandemic.</p> <p>Specifically, this presentation will discuss the importance of communities of teaching focussed practitioners, and how the DryLabs community, hosted by Oxford University inspired an analogous community of practice for physics (Physics LTHE). Through discussions and advice sharing across these networks, institutions were able to successfully and confidently deliver degree programmes with a degree of consistency.</p> <p>The Central Teaching Laboratories at the University of Liverpool were active in these communities and provided consultation to other institutions through DryLabs, Physics LTHE and Royal Society of Chemistry.</p> <p>In addition, this presentation will discuss how the community environment present in live teaching laboratories was replicated online through a synchronous virtual chemistry experiment. Key to the success of this online lab environment was access to remote services and key features in Zoom and Microsoft Teams.</p>			
<b>14.00-14.15</b>	<b>eSTeEM Scholarship Projects of the Year and Best Interactive Poster Presentation Awards followed by Closing Remarks by Kevin Shakesheff, Pro Vice Chancellor, RES</b>			<b>Hub Lecture Theatre</b>
<b>14.15</b>	<b>Conference Close</b>			