The 15th eSTEeM Annual Conference 2026

Conference Booklet

29-30 April 2026
www.open.ac.uk/esteem

Contents

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Mark Brandon, Interim Pro Vice Chancellor, Research & Innovation

Daphne Chang, eSTEeM Director, STEM

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Open University colleagues, students and invited international colleagues who have contributed and participated in the conference.

Programme – Day 1

Wednesday 29th April 2026

Time	Session	Room
9.15-10.00	**Registration and Coffee**	**Hub Reception**
10.00-10.05	**Welcome and Introduction** Daphne Chang and Fiona Aiken, eSTEeM Directors	**Hub Lecture Theatre**
10.05-10.15	**Welcome Address** Victoria Nicholas, Associate Dean, Faculty & Strategy	**Hub Lecture Theatre**
10.15-11.00	**Keynote Presentation** Sam Nolan, Director, Durham Centre for Academic Development, Teaching and Learning Centre **Small Questions, Big Change: A Personal Journey Through the Scholarship of Teaching and Learning**	**Hub Lecture Theatre**
11.00-11.15	**Break**	**Medlar and Juniper**

11.30-12.30 **Chair:** **Sarah** **Daniell**	**Parallel Session A: Interactive Oral Presentations – Assessment and Feedback**		**CMR 1**
	Becca Whitehead and Gemma Warriner	Evaluating the effectiveness and student experience of using plug-in tablets as part of robust online assessment	
	Fiona Moorman, Katja Rietdorf and Karen New	Academic discussions: evaluating student experience and outcomes and tutor perceptions of this novel form of assessment	
	Sally Jordan, Jonathan Nylk, Becca Whitehead and Cath Brown	Improving performance on remote examinations in symbolically-rich disciplines: lessons from the past and lessons for the future	
11.30-12.30 **Chair: Sue Pawley**	**Parallel Session B: Interactive Oral Presentations – Continuation and Completion & Innovations in STEM Teaching and Learning**		**CMR 11**
	Silvia Varagnolo, Zahra Golrokhi, Colum McKenna, James Openshaw, Shawndra	Gamification to increase participation in maths practice quizzes in Level 1 Engineering modules	

	Hayes-Budgen and Elizabeth Mathews		
	Ivan Sudakow, Andrey Umerski, Gregory Carslaw, Phil Foster and Adam Wayne	Online calculus games for distance learners: what works and why	
	Ruth Neal, Ellen Marshall and Emma Steele	Students as partners to incorporate learning preferences and inclusivity into curriculum design and improve learning outcomes	
11.30-12.30 **Chair:** **Mark Jones**	**Parallel Session C: Interactive Oral Presentations – Sustainability in the STEM Curriculum & Employability**		**CMR 15**
	Emma Dewberry and Vera Hale	Transformative Design Education: Cultivating Capabilities and Skills for the 21st Century	
	Martin Braun, Georgina Gough, Carlton Wood, Anna Elliott, Maria Nita, Kathleen Calder, Rosie Meade and Paul Astles	Linking Physics and the Disciplines: Reinterpreting Biglan's Framework for Sustainability Integration	

	Sarel Marais, Gareth Neighbour and Russ Lewis	A Quizzical Approach to Employer-Facing Education: Engaging the eSTEeM Community through Participatory Action Research	
11.30-12.30 **Chair: Trevor Collins**	**Parallel Session D: Interactive Oral Presentations – Student Support & International collaborations in STEM Teaching and Learning**		**Library Seminar Rooms 1-2**
	Nicola McIntyre, Cath Brown, Linda Moore and Eleanor Crabb	Creating a suite of maths support for LHCS students	
	Rachel Hilliam	What Happens After the Project Ends? Lessons learnt from tracing the impact of three eSTEeM Scholarship projects in Mathematics and Statistics	
	Sarah Davies, Jane Cullen and Maria Velasco	Co-investigating preparedness for virtual practical STEM education: testing and learning in Ghana	
12.30-13.30	**Lunch**		**Medlar and Juniper**

13.45-14.45	**Parallel Session E: Workshop/Demonstration – Student Support**		**CMR 1**
	Rosie Boltryk and Emma Champion	How does it feel to support students with extensions: the AL experience	
13.45-14.45	**Parallel Session F: Workshop/Demonstration – Employability**		**CMR 11**
	Fiona Gleed, Claudia Eckert, Mark Addis and Karen Storey	Mapping the soft skills brought by mature students to Engineering Education	
13.45-14.45	**Parallel Session G: Workshop/Demonstration – Innovations in STEM Teaching and Learning**		**CMR 15**
	Dimitar Valchev	Remote space propulsion lab	
14.45-15.00	**Break**		**Medlar and Juniper**
15.15-16.15 **Chair: Daphne Chang**	**Teaching Innovation Talks** A series of short, 5-minute talks discussing module/programme level initiatives, concentrating on what works and how it has improved the student experience, followed by Q&A.		**Hub Lecture Theatre**

	Becca Whitehead, Gemma Warriner and Judith Croston	Use of tablets to facilitate discussion-based assessments	
	Shaun Mutter, Daniel Payne, Kate Nixon and Rob Janes	Using labcasts to make chemistry assessments more authentic	
	Philip Wheeler	Lessons from teaching Environmental Scientists coding	
	Tim Lowe	Optionality in a Stage 3 emTMA	
	Leslie Mabon	Building awareness of values in environmental managers: the experience with T330 Environmental Management: Pathways to Sustainability	
	Soraya Kouadri Mostéfaoui and Stuart Auton	Beyond detection: strategies for assessment integrity in the GenAI era	
16.15–17.00	**15 Years of eSTEeM Celebration and Networking** Join us to formally mark our 15th anniversary and reflect on day one of the conference with colleagues over some light refreshments. An online session will be available for those joining remotely.		**Hub Lecture Theatre**
17.00	**End of Day One**		

Programme – Day 2

Thursday 30th April 2026

Time	Session		Online Room
9.00-9.45	**Registration and Coffee**		**Hub Reception**
9.45-10.45	**Parallel Session H: Workshop/Demonstration – Employability**		**CMR 1**
	Vera Hale, Emma Dewberry and Georgina Hawkins	Learning from the OU Sustainathon: Employability Skills through Sustainable Design Challenge	
9.45-10.45	**Parallel Session I: Workshop/Demonstration – Access, Participation and Success**		**CMR 11**
	Zoe Tompkins, Amaninder Singh, Kate Feliciello, Brent Cunningham and Andrew Smith	Decolonising Computing: Practical Steps for Inclusive Curriculum and Pedagogy	
9.45-10.45	**Parallel Session J: Workshop/Demonstration - Academic Professional Development and Recognition**		**CMR 15**

	Janet Haresnape, Carina Bossu and Sarah Daniell	The crucial role that scholarship of teaching and learning plays in Fellowship of the Higher Education Academy (HEA) applications	
10.45-11.00	**Break**		**Medlar and Juniper**
11.15-12.00	**Poster Presentations**		**Hub Lecture Theatre**
Poster 1	Alice Fraser-McDonald, Maria Townsend and Kambiz Saber-Sheikh	How valuable are 'quiet' tutorials for Level 1 Interdisciplinary Environmental Science students?	
Poster 2	Ian Bates and Gareth Neighbour	Transactional to Transformative: an evolution of the HE into FE partnership	
Poster 3	AnnMarie McKenna and Catherine Scott	AIDED – The AI Design Ed project. Practical application of AI tools in OU Design	
Poster 4	Servel Miller and Jenny Duckworth	Does student knowledge and perceptions of AI use as a learning support tool align with academic staff approaches to embedding it in the curriculum?	

Poster 5	Cath Brown and Andy Neate	Tackling illicit Generative AI use informally
Poster 6	Sam Johnson	Tracking Self-Efficacy in STEM: How Student Confidence Changes During Modules and Why It Matters
Poster 7	Elouise Huxor and Theodora Philcox	Creating a sense of belonging.... one postcard at a time
Poster 8	Zoë Chapman and Janette Wallace	Do Co-Created Digital Assets Contribute to Students' Sense of Belonging in LHCS?
Poster 9	Lucy Anderson, Sarah Daniell, Janette Wallace and Trevor Collins	From Pilot to Practice: Facilitating the use of a social virtual reality platform in LHCS
Poster 10	Katie Acutt, Fiona Moorman and Sarah Daniell	Bespoke tutor-student allocation for Health Sciences students
Poster 11	Ruth Neal, Ellen Marshall and Emma Steele	Students as partners to incorporate learning preferences and inclusivity into curriculum design and improve learning outcomes

Poster 12	Nitu Bharati, Edsoulla Chung and Paul Piwek	A survey of Stage 1 students on use of Generative AI and Argumentation	
Poster 13	Victoria Pearson, Maria Velasco, Linda Moore and Alison Condliffe	Investigating students' perceptions of university communications	
Poster 14	Harriet Marshall and Yvonne Chakraborty	Exploring How Structured Environmental Engagement Opportunities Foster a Sense of Belonging and Provide Support for Distance Learning Students' Eco-anxiety	
Poster 15	Andy Diament, Gemma Warriner and Stella Bradbury	Evaluating the Programming for Physical Sciences website and forums on SM123 Physics and Space	
Poster 16	Stuart Auton	Fixing Broken Content Access: A Design-Led Solution	
Poster 17	Chris Corcoran	Researching student barriers and enablers: a reflection on the role of research ethics	
12.00-13.00	**Lunch**		**Medlar and Juniper**

13.15-14.15 Chair: Cath Brown	**Parallel Session K: Interactive Oral Presentations – Access, Participation and Success; Student Support & Student Emotions and Wellbeing**		**CMR 1**
	Christopher Hutton, Fiona Aiken and Iris Verhagen	Investigating and supporting skills development needs for students transitioning between stages 1 and 2, and 2 and 3 in environmental sciences	
	Susan Pawley, Nicola McIntyre and Becca Whitehead	Identifying and supporting maths anxiety	
	Jake Hilliard, Karen Kear and Helen Donelan	Understanding students' emotion regulation when learning online	
13.15-14.15 Chair: Andrew Potter	**Parallel Session L: Interactive Oral Presentations – Access, Participation and Success**		**CMR 11**
	Willow Neal, Emmanuel Zuza, Kat Gauld, Elaine McPherson, Christopher	Patterns of Inequality in STEM Degree Awarding for LGBTQ+ Students in Distance Learning	

	Hutton and Ellesar Elhaggag		
	Louise MacBrayne, Jennie Bellamy, Isabella Henman and Kate Gibson	Postcode Inequity: Closing the Awarding Gap for Stage 1 STEM Students residing in our most deprived UK postcodes	
	Alice Fraser-McDonald, Sally Jordan, David Sharp and Teresa Sides	Progression of OU STEM students from taught courses to postgraduate research – motivations and barriers	
13.15-14.15 Chair: Cathy Smith	**Parallel Session M: Interactive Oral Presentations – Innovations in STEM Teaching and Learning**		**CMT 15**
	Emma Steele, Carol Calvert, Alison Bromley and Ruth Neal	Guiding students in the use of GenAI for study support	
	Hayley Ryder and Tacey O'Neil	You are not alone	
	Mark Hintze, Janette Wallace and Karen New	Automatic reference checker to save time and support ALs	

14.15-14.30	**Break**	**Medlar and Juniper**
14.30-15.30	**Panel Discussion - The Role of Scholarship in the OU's Emerging Strategy** As the University sets about developing its new strategy for the next five years, join us for a discussion about how scholarship can play an important role in shaping and delivering its vision of high-quality, digitally enabled education, research and partnership. Our invited panellists will be Mark Brandon (Interim PVC Research & Innovation), Ian Pickup (PVC Students), Victoria Nicholas (STEM Associate Dean, Faculty & Strategy) and Liz Hardie (Director of SCiLAB, FBL).	**Hub Lecture Theatre**
15.30-15.45	**eSTEeM Scholarship Projects of the Year, Best Poster Presentation, Most Immersive and Engaging Session Awards followed by Closing Remarks**	**Hub Lecture Theatre**
15.45	**Conference Close**	

Welcome and Introduction

Daphne Chang and Fiona Aiken, eSTEeM Directors

Welcome to the eSTEeM Annual Conference 2026, titled "Stepping Back and Stepping Up – 15 Years of eSTEeM". As this conference marks eSTEeM's 15th anniversary, we would like it to be an opportunity for colleagues to reflect on their scholarship journeys and the impact of their scholarship of teaching and learning (SoTL). Looking forward, we will be exploring future directions of STEM SoTL in the Open University and the broader challenges within STEM teaching and learning and in the HE sector more widely. Having had a successful online conference last year, we have opted for a hybrid conference this time to provide a chance for those who are able to make it in person to reconnect, with the flexibility for those who are not able to make it in person to participate in stimulating discussions remotely.

In true eSTEeM tradition, there are a range of interactive oral presentations to inform and stimulate your curiosity and interest in SoTL. Many of them are cutting edge scholarship in STEM teaching and learning. The incredibly popular Teaching Innovation Talks are back to showcase innovative pedagogy and use of technology. We are pleased that every School is contributing to them. Immersive workshops/demonstrations and interactive poster session also

feature again where you are able to have a hands-on experience in the outputs of some of the eSTEeM projects and to engage with all the poster authors. For those who are participating online, we have provided recorded presentations for you to get to know the projects.

Our keynote speaker is Professor Sam Nolan. Sam has been a physics AL for over twenty years. He is also the Director of the Durham Centre for Academic Development at Durham University. Sam will reflect on his personal journey into SoTL and explore how scholarly inquiry into teaching can evolve from small-scale practice-based curiosity into a catalyst for institutional change.

As the OU sets about developing its new strategy for the next five years, we would like to stimulate discussion and debate about how scholarship can play an important role in shaping the strategy. There will be a panel discussion at the end of Day 2, the panel will consist of Professor Mark Brandon (Interim PVC Research & Innovation), Professor Ian Pickup (PVC Students), Professor Vic Nicholas (STEM AD Faculty & Strategy) and Liz Hardie (Director of SCiLAB). Please join us for a thought-provoking session.

As in last year's event, we will award a best poster prize based on your votes and award a prize for the most engaging and immersive presentation/workshop of each day. The conference will close with the awarding of the Scholarship Projects of the Year prizes.

We hope you will enjoy reflecting on what eSTEeM has achieved over the past 15 years, engaging in conversations about SoTL, being inspired to collaborate and trying new practices/innovations that will contribute to impactful scholarship in the future over these two days.

Have fun!

Conference Information

Registration

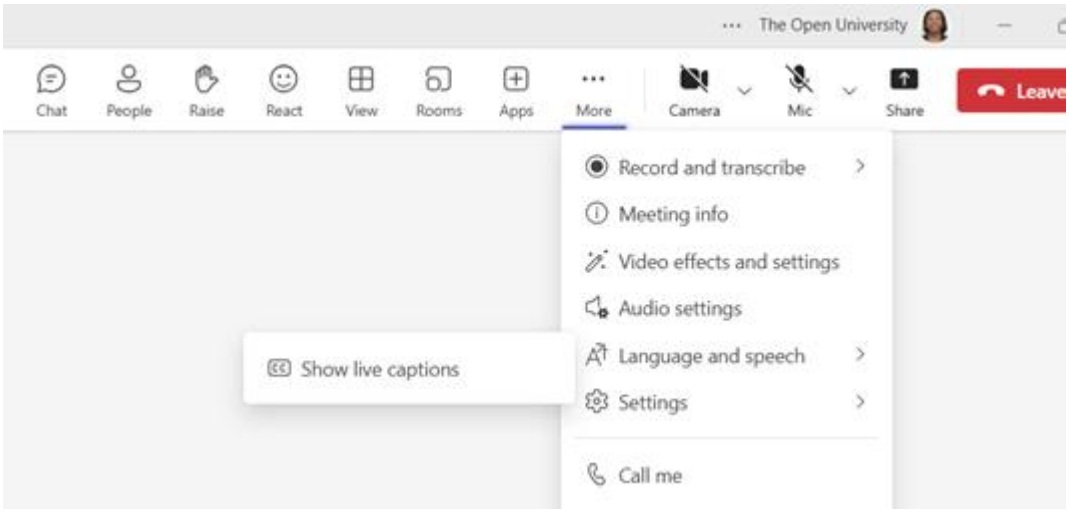
For delegates attending the conference in person, please make your way to the Hub Lecture Theatre for registration which will take place between 9.15-10.00 on Wednesday 29th April and between 9.00-9.45 on Thursday 30th April. Please visit the campus map for more details.

For delegates joining the conference remotely via Microsoft Teams, links for the sessions you have registered for are contained within your personalised programme in the joining instructions. You can visit the conference website under 'Related Resources' to download the programme titled '*eSTEeM-conference-programme-2026-online-FINAL'* which contains all the MS Teams links. The links can also be found on the eSTEeM & Co website. Please click on the conference programme for the relevant day and select the link for the required session.

If you do not already have the Teams app installed on your computer, upon clicking the link you will be asked whether you wish to 'Download the Windows app' or 'Join on the web instead', we would recommend that you install and use the app version which will allow you access to all of the features within Teams.

It is advisable to sign-in to MS Teams using your OU credentials – OUCU@open.ac.uk followed by your network password, otherwise you will appear as a 'Guest' and may experience issues accessing some of the features or viewing the content.

If required, participants can enable the closed captions feature within MS Teams. To enable, click 'More' on the toolbar, select 'Language and speech' then select 'Show live captions'



Travel, accommodation and expenses

For further information and guidance on traveling to the Walton Hall, please visit the travel advice pages.

If you are presenting your eSTEeM project at the conference or are part of an eSTEeM project team that is presenting, and you are not formally based at Walton Hall, then eSTEeM will cover your expenses for attending the conference. Please contact esteem@open.ac.uk who will provide further information about how to book travel and/or accommodation and claim for expenses. If you are presenting your work, which is not an eSTEeM approved project, and you are not formally based at Walton Hall, then permission should be sought from your school to claim expenses.

If you require advice about nearby accommodation, please contact esteem@open.ac.uk who will be happy to assist you.

Luggage storage

If required, we will have a secure room available for you to store light luggage until the end of the day on Wednesday 29th April and Thursday 30th April. Please ask at registration for more details.

Conference refreshments and sustainability

Conference registration for delegates attending in person includes tea and coffee on arrival, morning and afternoon breaks, light refreshments during the 15 years of eSTEeM celebration and networking session at 16.15-17.00 on day one and a buffet lunch on both days. If you have not already notified us of any special dietary requirements, then please do so immediately by contacting us at esteem@open.ac.uk, or please find a member of eSTEeM conference staff during the conference who can provide you with a lunch voucher.

To reduce waste, we would encourage you to bring along a travel mug and/or refillable water bottle, if possible. All catering outlets have chilled water dispensers. If you do not have a travel mug/refillable bottle, a small number of disposable coffee cups may be provided, which then go to a compostable waste stream. Water jugs will be available, and a small number of individual water bottles may also be provided. If you use one of the individual water bottles, please retain this and refill as required. Please note that 90% of bottles are fully recyclable with some being both recycled and recyclable.

Conference sessions and recordings

As the conference will be hybrid, all sessions will be available for online participation and will be recorded. Recordings will be made available as replays soon after the conference via the eSTEeM conference website.

A photographer and members of the eSTEeM conference team will be capturing photos and screen shots of the sessions, which may be made available to the public via the internet. Audience members are participants in this process. If you have any concerns, please speak to a member of the eSTEeM conference team.

Session etiquette and networking

For delegates attending in person, we respectfully ask that you use any personal electronic equipment with respect for session presenters and fellow delegates. We suggest using mobile phones and electronic equipment in silent mode.

For delegates participating online, please ensure that you mute your microphone if you are not presenting and when you are not speaking. You may also wish to set any mobile phones/devices to silent and set your status to 'Do Not Disturb'.

Wi-Fi and electrical equipment

Whilst on campus you can connect to the internet via eduroam using your OU credentials. Alternatively, you can use The Cloud for which you will need to create an account if you do not already have one.

Please remember that only Open University equipment can be plugged into electrical sockets.

Poster Presentations

A poster presentation session will take place for delegates attending in person on day two, Thursday 30th April, between 11.15-12.00 in the Hub Lecture Theatre. You are welcome to continue browsing posters over lunch between 12.00-13.00 and during day one as posters will be displayed throughout the conference.

Delegates attending remotely on day two will be invited to watch the pre-recorded poster presentations. Recordings will be available via the conference website under 'Related Resources' shortly.

All delegates will be invited to vote for the best poster presentation. In person delegates will be able to cast their vote using a paper voting form and ballot box. Delegates attending remotely should use the MS voting form; the link will be available via the conference website under 'Related Resources'. The votes from in person delegates and those from online participants will be collated to determine the winning poster. **Please only vote once**. Voting will close **on Thursday 30th April at 14.45.** The winning presentation will be announced at the end of the conference on Thursday 30th April, 15.30-15.45.

eSTEeM Scholarship Projects of the Year Awards

We will be announcing the 9th eSTEeM Scholarship Projects of the Year Awards which celebrate excellence in eSTEeM projects. The winners will be announced at the end of the conference between 15.30-15.45 on Thursday 30th April.

Most Engaging and Immersive Presentations

For the 2nd year we are inviting conference delegates to vote for their most engaging and immersive presentation for day one and day two. Links to the voting forms will be available via the conference website under 'Related Resources'. Voting will close **on Thursday 30th April at 14.45, please only vote once**. The winning presentation/workshop will be announced at the end of the conference on Thursday 30th April, 15.30-15.45.

Session changes

We will try to keep session changes to a minimum but inevitably there may be some last-minute changes or cancellations. Any information about changed or cancelled sessions will be posted on the notice board by the helpdesk in the Hub Reception and via the conference website.

Helpdesk

A helpdesk will be monitored by eSTEeM conference staff in the Hub Reception throughout the conference to help you with any queries that you may have.

For delegates attending online, eSTEeM conference staff will be available in the Medlar and Juniper online room to help you with any queries you may have or please email us at esteem@open.ac.uk. You are also welcome to use this space to informally network with other conference delegates who are attending the conference online during the lunch and refreshment breaks.

Security

If you have any emergency security issues, please ring ext. 53666 for the security lodge, or contact a member of the eSTEeM conference staff. Please do not leave personal items unattended. The University will not accept liability for loss or damage to personal items or equipment.

Parking and transport

If arriving by car, please ensure that you park in a designated parking space. Any vehicle clearly parked in an unauthorised location will be issued with a parking charge notice by campus security.

Accessibility

There is level access in most areas of the campus, please see a member of eSTEeM conference staff if you require assistance. Please contact us immediately if you have any mobility requirements of which you have not made us aware.

No Smoking Policy

The Open University operates a non-smoking policy. We ask you to respect this policy whilst on campus. All premises are designated smoke-free. Smoking is not allowed in any part of, or entrances to, any building, including bars and eating areas. Smoking whilst on site is only allowed outdoors in designated smoking points/green areas.

Feedback or queries

If you have any queries, concerns or would like to provide some feedback, then please get in touch with us by emailing esteem@open.ac.uk.

Keynote Biography

Sam Nolan

Professor Sam Nolan is Director of the Durham Centre for Academic Development (DCAD) at Durham University, where he leads institutional initiatives supporting innovation in teaching, learning and academic development.

Sam began his academic career as an astrophysicist at Durham before undertaking research in the United States. His interests gradually shifted toward science education, widening participation and the development of evidence-informed approaches to teaching in higher education. Over time his work has moved from discipline-based educational innovation into institutional leadership focused on educational strategy and change.

Alongside his role at Durham, Sam has had the joy of spending the past twenty years working as an Associate Lecturer in Physics at The Open University. This long-standing connection to the OU has provided a continuous grounding in the realities of teaching students studying in flexible and distance learning contexts in this most special of organisations.

His scholarship focuses on embedding the Scholarship of Teaching and Learning, digital and AI-enabled learning, active learning pedagogies and

approaches that strengthen student engagement and belonging. Much of his work explores how universities can create cultures that support educators to undertake scholarly inquiry into their teaching and use that work to inform institutional change.

For the national impact of his work in higher education, Sam has been awarded a National Teaching Fellowship and is a Principal Fellow of Advance HE. Through his leadership and scholarship, he continues to advocate for the role of SoTL as a catalyst for innovation, recognition and cultural change in higher education.

Book of Abstracts

Keynote Presentation

Small Questions, Big Change: A Personal Journey Through the Scholarship of Teaching and Learning

Sam Nolan, Durham University

This keynote reflects on a personal journey into the Scholarship of Teaching and Learning (SoTL) and explores how scholarly inquiry into teaching can evolve from small-scale practice-based curiosity into a catalyst for institutional change.

Beginning with early work as a physicist exploring ways to better prepare students for laboratory learning and to support their transition into university study, I will reflect on how initial SoTL projects created opportunities to rethink teaching practice through evidence-informed innovation. These experiences also revealed the importance of community, mentorship, and institutional structures that allow educational scholarship to flourish.

Drawing on my experience leading educational development at Durham University, I will explore how SoTL can influence institutional cultures within research-intensive universities. This includes the role of advocacy, building alliances across academic communities, and creating spaces where educators can experiment, reflect, and collaborate. I will discuss how initiatives such as

institutional education laboratories, student–staff partnership projects, and digital learning innovations can provide mechanisms through which SoTL becomes embedded within everyday academic practice.

The keynote will also consider the evolving landscape of recognition and reward for educational scholarship. As universities increasingly seek to value teaching excellence alongside research, frameworks such as education-focused career pathways, professional recognition schemes, and national awards play an important role in legitimising and amplifying the impact of SoTL.

Finally, I will reflect on the wider impact of SoTL as a driver of institutional evolution. At a time when universities are responding to rapid technological change, new student expectations, and growing demands for inclusive and flexible learning, scholarly approaches to teaching provide a powerful lens through which institutions can rethink their educational missions.

Through examples from my own work and the work of colleagues across the sector, I will argue that SoTL is not simply about improving individual teaching practice. Rather, it can act as a catalyst for collective innovation, supporting universities to evolve their cultures, structures, and approaches to learning in ways that benefit both students and educators.

Parallel Session A

Evaluating the effectiveness and student experience of using plug-in tablets as part of robust online assessment

Becca Whitehead and Gemma Warriner, STEM

Keywords: Generative AI; Innovative assessment; Academic integrity

Our assessment is becoming increasingly vulnerable to the use of Generative AI to answer questions, rather than the students themselves. We aim to investigate the possibility of online assessment via a verbal one-to-one discussion. As part of this we will equip both tutors and students with plug-in tablets to increase the range of scientific and mathematical work that can be assessed, and the functionality of these tablets will also be investigated.

We have completed phase 1 of our project which was a trial of the use of the tablets with 6 associate lecturers, playing the roles of both tutors and students in half hour adobe connect sessions. The sessions were based on discussion about 5 physics problems that involved drawing diagrams, graphs and equations on a shared screen so both tutor and student view it in real time. We provided a mark scheme for the tutor so the discussion could be consistently graded as part of an assessment.

We aim to complete two more phases over the next two academic years, initially on one module with 20 students, then with 2 modules and 80 students (phases 2 and 3). After each phase we intend to evaluate the success of the

sessions for both students and tutors, via survey questions. We are interested in both the functionality and need for the plug-in tablet, and the student experience.

In this presentation we will outline our findings from this initial phase and carry out a live demonstration of the plug-in tablet for participants. We will invite participants to use some tablets to gain an understanding of the student experience.

The intended learning outcomes for participants are to: understand about the background of our project, learn more about our ongoing work and to gain insights into the student and tutor experience of using plug-in tablets.

Academic discussions: evaluating student experience and outcomes and tutor perceptions of this novel form of assessment

Fiona Moorman, Katja Rietdorf and Karen New, STEM

Keywords: Oral assessment; Academic discussion; Anxiety; Support; Communication

The HEI sector has shown increased interest in the exploration of spoken exams. Real-time oral exams can provide opportunities for spontaneous, personalised student-tutor interactions, providing an authentic assessment experience whilst facilitating verification, making them a potentially useful approach for addressing academic integrity concerns (Newell, 2023, Davey et al., 2025). Oral exams have also been shown to support deep learning (Iannone et al., 2020) as

well as development of communication and other key employability skills. (Villarroel et al., 2018).

However, there are concerns that different demographic groupings may be disproportionally disadvantaged by this form of assessment (Rae et al., 2025). Additionally, there is evidence that this form of assessment can be associated with high anxiety levels, with students uncertain as to how to prepare for spoken assessment (Iannone et al., 2020). The literature underscores the importance of providing students with pre-assessment support and guidance and opportunities to participate in mock spoken examinations (Stephenson et al., 2025; Davey et al., 2025).

Although oral assessments have been used successfully for several years within the OU in other faculties, for example an Interactive Speaking Assessment task on L112 ‘French studies 1’ and a Practice Assessment Interview on K211 ‘Developing nursing practice’, spoken assessments do not currently form part of the assessment strategies on STEM modules. S317 and S296 are compulsory modules in biology qualifications. Both modules will introduce an oral assessment into their assessment strategies from 26J, using the term 'academic discussion' (AD) to reflect the discursive nature of the assessment, to offer a less intimidating name whilst retaining clarity over the nature of the task.

This project aims to undertake a comprehensive evaluation of ADs within S296 and S317, including a detailed evaluation of the logistics of conducting ADs (booking systems, types of AD questions and scoring, usefulness of tutor and student supportive measures) as well as other aspects of tutor and student experience. We plan to collect demographic data and analyse student

engagement and withdrawal data and student outcomes on the 26J and 27J presentations of both modules.

In this presentation, we will provide an update on the implementation of ADs within our modules, including initial tutor feedback and the development of tutor- and student-facing guidance. We will also share a live demonstration of a mock AD and will invite discussion of our draft survey instruments. We hope to facilitate discussions with other colleagues interested in this novel form of assessment.

References:

Davey, S., Birbeck, D., Nallaya, S., Sallows, G., and Della Vedova, C. (2025). 'Utilising one-on-one interactive oral assessments as the major final assessment within a bioscience course.' Assessment & Evaluation in Higher Education, 50(7) pp1154–1171. https://doi.org/10.1080/02602938.2025.2502577.

Iannone, P., Czichowsky, C. and Ruf, J. (2020) 'The impact of high stakes oral performance assessment on students' approaches to learning: a case study' Educational Studies in Mathematics 103, pp313-337 https://doi.org/10.1007/s10649-020-09937-4.

Newell, S. (2025). Employing the interactive oral to mitigate threats to academic integrity from ChatGPT. Scholarship of Teaching and Learning in Psychology, 11(3), pp527–536. https://doi.org/10.1037/stl0000371.

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Improving performance on remote examinations in symbolically-rich disciplines: lessons from the past and lessons for the future

Sally Jordan, Jonathan Nylk, Becca Whitehead and Cath Brown, STEM

Keywords: Online examinations; Exam anxiety; Student experience

This interactive presentation will reflect on the findings of the eSTEeM project "Improving completion of remote examinations in physics". Building on earlier work, the project has investigated the effectiveness of various initiatives in encouraging student engagement with the remote exam for a Stage 2 physics module. The initiatives included a change in assessment strategy, additional opportunities for practice, and the provision of 10 videos showing a member of the Module Team working through a practice paper and talking through the marking of it.

Key results were a significant reduction in the proportion of students who word-processed their answers, a reduction in the number of incomplete scripts

submitted and a noticeable increase in the submission rate for later TMAs and the exam. The project has also provided insight into the causes of exam anxiety and other barriers to good performance in online exams.

Participants will be encouraged to reflect on the project's findings in the light of their wider experience of assessment (looking back) and to consider implications for assessment and student support in the future (looking forward).

Note: During the lifetime of the project, discussion regarding the future of online exams has become dominated by concerns over inappropriate use of Gen AI. The implications of this for the project's findings is acknowledged, but it will not be the focus of the presentation.

Parallel Session B

Gamification to increase participation in maths practice quizzes in Level 1 Engineering modules

Silvia Varagnolo[1], Zahra Golrokhi[1], Colum McKenna[2], James Openshaw[3], Shawndra Hayes-Budgen[3] and Elizabeth Mathews[1], STEM[1], Digital Services[2], LDS[3]

Keywords: Gamification, Maths practice, Postcards, Digital badges, Moodle quizzes

The aim of our project is to improve students' engagement with maths exercise through the gamification of existing practice quizzes. The specific context is T192 (the first module in the Engineering Qualification) which already features weekly maths practice quizzes. However, the proposed intervention is meant to be

easily applicable with limited resources to any module that embeds Moodle quizzes not necessarily based on maths questions.

Students' engagement with the T192 practice quizzes decays in time while maths concepts essential for the study progression are covered in the later parts of the module. Hence, we are looking to gamify the quizzes to maintain the initial level of practice through the module. Furthermore, the gamification would prompt students who do not achieve a satisfactory outcome to repeat the quiz, which they can do without any detriment.

The gamification is based on three small interventions: 1) a modification of the way the practice quiz is presented, 2) a modification of the feedback and 3) the introduction of rewards. Students will be told that they will gain a digital badge if they complete 6 practice quizzes with a score above a certain threshold. For each completed quiz they will get a token.

The quizzes' introductory webpage will be more eye-catching, and the gamified quizzes will be 'advertised' through different channels, like forums, news items and postcards sent by tutors. The feedback will become conditional: it will praise students who achieved the threshold to get the badge and will encourage students to repeat the quiz if the threshold was not achieved, possibly after revising the corresponding maths contents. In both cases, the feedback will encourage students to undertake another quiz (either the following gamified quiz or the same one) to keep them practicing maths to obtain the final badge.

The design of the gamification was informed by a literature review, the analysis of the students' engagement with the practice quizzes in past presentations, and input from students. The effectiveness of this approach was evaluated through a survey, in-depth interviews with T192 students and analysis of the number of clicks on the quizzes for the 25D presentation and have been extended up to 26D. This presentation will describe our gamification framework and its outputs in terms of students' engagement and success from the 25D presentation.

Online calculus games for distance learners: what works and why

Ivan Sudakow[1], Andrey Umerski[1], Gregory Carslaw[2], Phil Foster[1] and Adam Wayne[1], STEM[1], FASS[2]

Keywords: Game-based learning; Calculus; Distance education; Formative assessment; Gamification

Distance learners often meet calculus through independent study, making low-stakes practice and timely feedback difficult. This eSTEeM project designed and evaluated three browser-based didactic calculus games—Maths-jong, Calculus Wizard, and Time Traveler (Calculus Time)—built in Unity WebGL and delivered as no-install resources across Open University modules MST125, MST224, and T272. Student perceptions were gathered through voluntary surveys between May 2024 and May 2025 (92 responses; 91 complete), combining Likert-style ratings with thematic coding of open comments.

Across modules, the games were mainly experienced as consolidation tools: 60% rated the mathematical difficulty as appropriate, 24% as easy, and 15% as challenging. Support for embedding was strong overall, with 56% favouring permanent integration (18% neutral; 26% negative), and the highest endorsement in T272 (80% positive). Design choices strongly shaped acceptance. Maths-jong was the clear favourite (>70%), with participants highlighting its visual pattern-matching, intuitive navigation, and relaxed pace. Time pressure produced polarised reactions: 37% enjoyed countdown timers, 41% disliked them, and 22% were neutral; older learners more frequently reported stress and reduced accessibility under timed play. Uptake as a revision tool was moderate (34%), indicating that discoverability and placement within study weeks matter. Qualitative feedback repeatedly requested in-game scaffolding, especially hints and step-by-step explanations.

The project concludes that didactic games can provide scalable retrieval practice for asynchronous calculus, provided they are integrated intentionally and designed for accessibility. Priority improvements are optional timers, clearer interfaces, and embedded feedback to strengthen formative value. These findings suggest that usability and pacing, not novelty, drive acceptance among adults.

Students as partners to incorporate learning preferences and inclusivity into curriculum design and improve learning outcomes

Ruth Neal, Ellen Marshall and Emma Steele, STEM

Keywords: Students, Participation, Learning, Engagement, Diversity

This interactive talk will use initial findings from a study to evaluate student perception of current instructional methods and learning preferences to prompt wider discussion on similar research or implementing inclusive and engaging content to a diverse student population.

The project aims to incorporate the student voice within the upcoming lifecycle review of two undergraduate statistics modules (M140 – Introducing Statistics and M248 Data Analysis) within the department of Maths and Statistics through large-scale student surveys and focus groups. Currently, both modules rely heavily on traditional, mathematics-focused text with separate computer books for teaching the statistical software Minitab which is a paid point-and-click package.

The research will explore whether current instructional methods and content are suitable for learning statistics effectively for students from different backgrounds. Highlighting what is working well and identify any barriers to engagement.

In addition, students will be asked about their preferences for learning content generally, opportunities for improvement, and ensuring material is accessible and inclusive particularly for those who may be disadvantaged by the current format.

Our key research questions are:

- Which aspects of the current learning format support or hinder student learning?

- Are particular groups disadvantaged by the current learning materials?
- What are the general preferences for learning going forward and are there particular group with different views?

Structure of the session:

An outline of the project, and an account of the progress so far.

By presenting our findings so far, participants can appreciate any challenges faced by students when engaging with the current teaching format and preferences for future development.

We will ask participants to share their own ideas on interactive teaching materials. This will be done in groups if numbers are sufficient.

Parallel Session C

Transformative Design Education: Cultivating Capabilities and Skills for the 21st Century

Emma Dewberry and Vera Hale, STEM

Keywords: Design education; Sustainability; Green skills; Life-wide capabilities; Transformative education

This paper investigates how we integrate approaches to design for sustainability education to facilitate transformative learning journeys and to support student employability. We focus specifically on the idea of building capabilities and skills that respond to the complex challenges of both social

injustice and the ecological crises. We also reflect on the idea of life-wide capabilities to explore the value of learning across all aspects of life, not just in the formal learning of a qualification. We believe the embedding of knowledge in the everyday is a core component of building effective sustainability literacies.

In this project we review existing frameworks for embedding sustainability in education, explore 'green skills' and competencies crucial for the 21st Century, and identify diverse approaches to delivering and engaging with such learning, particularly addressing the value of project-based learning in education. Our primary data sources include a UK Responsible Futures survey in which OU students were included, and a survey of Open University STEM students and staff who participated in a 'Sustainathon' project. An analysis of this data, coupled with the exploration of relevant education for sustainability literature, helps identify a range of capabilities and skills that support transformative learning practices for sustainability.

Drawing on these findings, the paper proposes how sustainability competencies and green skills, can be integrated in a new stage 3 design module. Its predecessor module has an interdisciplinary audience which we would like to grow in this next version of the module through making clear the relationship between future facing design-led approaches to sustainable change and how these link to employability values and skills.

We aim to use this interactive session to gain feedback from the audience about which capabilities and skills resonate with different disciplines. At the end of the session the audience should have a deeper understanding of how

education for sustainability sits in OU design modules, and a broader appreciation of capacity and skills building as a learning design.

The session links to a workshop activity which runs through, and reflects on, an OU Employability and Design initiative - Sustainathon – a project working with STEM students and external partners.

Linking Physics and the Disciplines: Reinterpreting Biglan's Framework for Sustainability Integration

Martin Braun[1], Georgina Gough[2], Carlton Wood[1], Anna Elliott[3], Maria Nita[4], Kathleen Calder[5], Rosie Meade[6] and Paul Astles[5], STEM[1], University of the West of England[2], WELS[3], FASS[4], LDS[5], PVC-S[6]

Keywords: Biglan's framework; Sustainability education; Key Sustainability Competencies; Physics education

AIM:

This interactive session explores how Biglan's framework of academic disciplines can be extended to understand and support the embedding of sustainability within different subject areas.

OVERVIEW:

Biglan's framework characterises academic disciplines along three dimensions—hard vs. soft, pure vs. applied, and life vs. non-life—providing a useful lens for understanding differences in teaching practices, research cultures, and disciplinary identities. Building on insights from an eSTEeM project

focused on integrating environmental sustainability and social justice into physics teaching, this session asks whether the UN Sustainable Development Goals (SDGs) and Key Sustainability Competencies (KSCs) can be meaningfully mapped onto Biglan's disciplinary categories.

CASE STUDY: Physics

Although many sustainability challenges arise from physical principles, embedding environmental sustainability within physics education remains a significant challenge. Because sustainability issues stem largely from how technologies are applied, they are often seen as societal rather than purely scientific concerns. This leads to two persistent barriers: the physics curriculum does not naturally accommodate sustainability or social justice discussions, and educators often feel underprepared to integrate these themes.

The project developed a practical framework—a toolkit—to help physics lecturers make sustainability connections more explicit. This included linking UN KSCs to existing learning materials, explaining how specific physics skills relate to sustainability, and embedding these explanations within module introductions, VLE content, and reflective TMA questions.

A large-scale evaluation was conducted across three undergraduate physics modules (nearly 1,500 students). Surveys administered at the start of the year and again after a relevant TMA showed that the intervention increased students' awareness of how physics relates to sustainability. However, broader knowledge, attitudes, and self-reported behaviours remained largely unchanged.

What Participants Will Do:

In this session, participants will:

- Analyse whether SDGs and KSCs align differently across hard/soft or pure/applied fields.
- Work collaboratively to sketch discipline-specific or cross-disciplinary models for embedding sustainability.
- Reflect on the transferability of the physics case study to their own teaching contexts.

A Quizzical Approach to Employer-Facing Education: Engaging the eSTEeM Community through Participatory Action Research

Sarel Marais, Gareth Neighbour and Russ Lewis, STEM

Keywords: Employer-facing education; Higher Education policy; Employability; Upskilling; Partnership

Partnership work with employers is increasingly recognised as a critical mechanism for addressing skills gaps within the existing workforce, yet its definition, value, and practical challenges remain under-explored within scholarship of teaching and learning. The authors present a definition of what employer-facing education is. Building on our recent paper and ongoing employer-facing education project, this interactive conference session adopts a deliberately quizzical approach to stimulate shared reflection and evidence generation within the eSTEeM community.

The session will be structured around a series of carefully designed multiple-choice questions posed to the audience, using live polling to capture responses in real time. Questions will explore understandings of employer-facing education, perceived barriers for employers and employees, challenges associated with work-based learning and assessment, and the role of distance learning institutions such as the Open University. After each question, aggregated responses will be discussed collectively, enabling participants to reflect on their assumptions, compare perspectives, and surface areas of consensus and tension.

The activity is framed as a participatory action research exercise, generating data on how the eSTEeM community conceptualises and values employer-facing education. The session aims both to inform future project directions and to model an engaging, dialogic method for gathering scholarly insight on complex educational practices.

Parallel Session D

Creating a suite of maths support for LHCS students

Nicola McIntyre, Cath Brown, Linda Moore and Eleanor Crabb, STEM

Keywords: Maths support; Science modules; One to one clinics; Workshops; Cross-module support

Science students require some mathematical competence, yet students in Life, Health and Chemical Sciences may be unaware of this expectation prior to enrolling, and our open entry policy means that even GCSE-level competence cannot be assumed. Additionally, a significant proportion of students exhibit signs of mathematical anxiety, as measured using the maths anxiety scale, with recent research suggesting that this could be as high as 65% of biology students, 56% of health sciences students and 36% of chemistry students (Pawley and Organ 2022).

The standard approach to maths tuition entails delivering mathematical support within the science modules, but this has various disadvantages:

- Limited tuition time means sessions cover multiple skills, so not necessarily addressing student needs, and potentially being overwhelming for unconfident students.
- There is limited time for practice, or for embedding learning.
- The presence of more mathematically confident and competent students can be intimidating.
- Students at higher levels may also continue to struggle with mathematical skills that have been covered at lower levels, so in-module support may be either repetitive, or building on shaky foundations.

To address this, we are offering additional cross-module support, on the science study site, to enable students at all levels to enhance their skills. This includes short, online, small group sessions on specific well-defined areas of

mathematics, such as “scientific notation” or “exponentials and logarithms”, a suite of short recordings covering these topics, and bookable one to one sessions with a tutor in an online room, on topics decided by the student. Further plans include online workshops where students can tackle problems together, a range of practice questions tailored to address the concepts covered in the videos, and a full mapping of these resources to our modules.

Evaluations so far have been positive, with the majority of students finding the sessions at the right level, and all stating they are helpful or very helpful.

In this session we will outline our progress so far, before encouraging a general discussion on the advantages, disadvantages and potential of cross-module support.

Reference:

Pawley, S. and Organ, S. (2022), Recognising and addressing maths anxiety within mature STEM students at a distance learning university, eSTEeM Seminar Series presentation. Sue Pawley and Sally Organ - Recognising and addressing maths anxiety within STEM students

What Happens After the Project Ends? Lessons learnt from tracing the impact of three eSTEeM Scholarship projects in Mathematics and Statistics

Rachel Hilliam, STEM

Keywords: Student support; Statistical anxiety; equality

This talk focuses on the professional and community impact of three key eSTEeM projects in which I have been involved, highlighting how scholarship has informed practice, policy, and student outcomes.

The first project investigated differences in the diversity of Staff Tutors across Schools. Its impact included identifying practical needs of Staff Tutors, contributing evidence to Athena SWAN submissions and promotion criteria, and supporting institutional discussions around equality and inclusion. Personally, this work enabled dissemination through a wide range of media and audiences.

The second project evaluated the effectiveness of the Mathematics and Statistics Study Site, which hosts resources developed through multiple scholarship projects. The interdisciplinary project team included student support and curriculum staff, an Associate Lecturer, and a student. Findings directly informed institutional change, leading to the integration of Study Sites into the Knowledge Management System used by all student support advisors, the development of a structured communication framework for students, and a renewed focus on careers resources. This resulted in close collaboration between the School of Mathematics and Statistics and Careers, including the creation of several videos. The project was featured in the University's compendium of case studies on the Impact of Scholarship of Teaching and Learning and contributed to the University's TEF 2022 Gold submission. It has also underpinned several papers, blog posts, conference presentations, and invited external seminars.

The final project focused on statistical anxiety and led to the development of a new self-reflective tool for students studying statistics across multiple modules.

This intervention was associated with increased retention rates and has generated ongoing international interest, including invitations to speak and new collaborative opportunities.

Together, these projects demonstrate how scholarship can generate meaningful impact at individual, institutional, and sector levels.

Co-investigating preparedness for virtual practical STEM education: testing and learning in Ghana

Sarah Davies[1], Jane Cullen[2] and Maria Velasco[1], STEM[1], WELS[2]

Keywords: Practical science; Virtual laboratory; Technology-enhanced learning; Co-creation; International collaboration

Virtual laboratories and virtual fieldwork can be powerful tools for providing practical learning opportunities in STEM; however, for such approaches to be successful, they require an understanding of the technological and pedagogical context.

This project, which was a collaboration between Open University and University of Cape Coast, Ghana (UCC), explored the potential for virtual STEM practical education at UCC. UCC provides undergraduate and postgraduate programmes training future science teachers as well as scientists and thus represented an ideal population to test the efficacy and suitability of a transformational virtual STEM laboratory in both the training of teachers and future practitioners.

The overall approach was to investigate attitudes and pedagogical and technical preparedness for computer-based practical STEM learning and teaching at UCC through co-designed research, qualitative and quantitative data gathering and analysis.

Activities included a stakeholder workshop in Ghana, interviews with STEM academics and senior university staff, a UCC-based focus group workshop with undergraduate science/science education students, a survey of UCC undergraduate students and regular virtual progress meetings between OU and UCC colleagues. As part of this project, UCC created their own instantiation of Open STEM Africa virtual laboratory materials: Open STEM Lab | University of Cape Coast

In this presentation we discuss some of the quantitative and qualitative results from the study. Additional strong messages from this project highlighted the importance of leadership from within Africa and the benefits of co-creation and collaboration.

Parallel Session E

How does it feel to support students with extensions: the AL experience

Rosie Boltryk and Emma Champion, STEM

Keywords: Extensions; EDIA; TMA submission and student retention; AL experience; Student support

Previous scholarship has shown that students with extensions are more likely to withdraw or achieve lower grades and that extensions are used by a higher proportion of students within EDIA groups. Whilst this work has shown correlations between extensions and student outcomes, the actual student experience is not well understood nor is the AL experience of managing extension. In addition, the equitability of extensions remains unclear.

Therefore, this project aims to investigate the link between the use of extensions, the experience of students on the module, and retention. It will also investigate the AL experience and how extensions affect protected characteristic groups.

To achieve this, a series of student surveys has collected data from T192 and T194 students on their experiences around extensions and catching up, where the use of extensions is 9% and 20% of TMAs, respectively. Student interviews have been conducted to explore their experiences more deeply and with the involvement of SST colleagues. Data has also been collected from ALs on T192 and T194 via a survey and reflective diary activity. A thematic analysis to examine the information collected is now in progress. Ultimately, the findings from this project will be used to inform future scholarship, with the ultimate outcome being to help E&I ALs improve their support to students with extensions, improve the outcomes for those students and improve retention.

The workshop will broadly be split into two parts. During the first half of the session, the audience will be invited to reflect on and discuss AL practice in

granting extensions; this will include reviewing data from our AL survey related to AL practice, a discussion on the causes of variations in practice, the impacts of variations in practice and on what would 'good' looks like in terms of AL practice in granting/managing extensions. The second half of the session will explore the impacts of extensions on ALs, including impacts on work, personal time and emotionally. We will discuss a case study, share survey data and share thoughts on the AL experience.

The intended learning outcomes for participants is an improved understanding of the AL experience related to extensions.

Parallel Session F

Mapping the soft skills brought by mature students to Engineering Education

Fiona Gleed[1], Claudia Eckert[1], Mark Addis[2] and Karen Storey[2], STEM[1], WELS[2]

Keywords: Soft skills; Mature students; Employability; Engineering profession; Engineering practice

Soft skills are essential criteria for degree accreditation and individual professional registration. Students are expected to develop and demonstrate these skills in education, alongside technical principles.

'Soft skills' is a loosely defined term involving several different but related characterisations, with clusters of abilities covering skills such as problem solving, communicating information, and personal interactions. They depend

upon general tacit and explicit knowledge about human interaction, applied in many different fields, and hence may also be termed transferable skills.

Soft skills pose a particular challenge for distance education as there is limited opportunity for working with peers. Groupwork and social learning can play a significant role in development of soft skills, with opportunities for observation and rehearsal in assigned tasks and extra-curricular activities. However, many students in distance education are mature and have already developed a range of soft skills in their personal and professional lives. The pattern and development of these skills varies with intersecting dimensions of diversity, such as gender and socio-economic status. Hence, recognition of existing soft skills has potential to boost confidence and inform personal development planning. Understanding the range of soft skills at entry, and the requirements for progression in particular careers, also allows enhancement of the curriculum to address gaps and may suggest opportunities for genuine efficiencies in module production.

The workshop will involve discussion of soft skills definitions, categorisation of skills within broader areas, and mapping of skills against entry profiles and module descriptions. The project team are focusing on Engineering and Nursing but the emphasis on skills at entry and module learning outcomes means the workshop is relevant for participants from across STEM, and beyond. Participants will develop their understanding of soft skills, consider how expectations differ by discipline and reflect on opportunities to challenge stereotypes.

Parallel Session G

Remote space propulsion lab

Dimitar Valchev, STEM

Keywords: Ion thruster; Plasma; Electric propulsion; Space propulsion

Space propulsion is a central theme in courses for students aiming to become literate in space systems engineering. Electric propulsion is of growing interest because of its many uses in space exploration and Earth orbiting missions.

Practical work in electric propulsion requires vacuum conditions, high voltages, safety measures and control of ion engine parameters that would turn out to be too demanding in conventional student laboratory settings. In response to such a demand, this online electric propulsion setup within the OpenSTEM Labs complex has been developed with funding through a recent Pathfinder project. It is a proof-of-concept for a space propulsion lab activity, suitable for and accessible by 3rd level engineering, MEng and MSc in Space Science and Engineering students. Its work will be shown in this demonstration session.

The equipment consists of a prototype ion engine assembled by readily available materials in the OU STEM Engineering Facility Workshop and mounted in a small vacuum chamber located in the Plasma Lab at Perry Building. Three power supplies, connected to the setup – two high-voltage and one low-voltage – are controlled online by students/audience, who can estimate the thrust of the resulting plasma plume through observing it by a fixed webcam. The low-voltage power supply is used for a valve system for supplying a noble

gas to the ion thruster. The two high-voltage power supplies are used for ionising the gas and accelerating the resulting plasma through the ion thruster's aperture.

The users of this lab activity can turn on/off the three power supplies, vary their voltages, and observe the resulting plasma plume on the webcam pointing towards the ion thruster. An overlay on the camera image in the interface shows the possibility for an optional further analysis with image processing software for accurate quantification of the so formed plasma plume.

The educational value of the setup is strengthened by being naturally suitable for coupling with an optional extended reality experience, namely simulating control of planetary orbit, interplanetary trajectory and spacecraft attitude with small ion engines, such as the one studied in this demonstration.

The intended learning outcomes are aligned to the corresponding Space Science and Technology qualification and are thus centred around the S818 Space science module Knowledge and understanding learning outcomes:

- The design and operation of space-based instrumentation;
- The aspects of space mission design and operation relevant to scientific applications.

Teaching Innovation Talks

Use of tablets to facilitate discussion-based assessments

Becca Whitehead, Gemma Warriner and Judith Croston, STEM

SPS are exploring the use of plug-in tablets to facilitate student-tutor discussions of physical sciences topics, through making it easy to discuss and share equations, derivations and diagrams in an interactive way. Our ongoing pilot will investigate whether this may enable a new assessment format that is robust against academic misconduct while supporting development on communication skills. We'll discuss the ongoing pilot work and, time permitting, may include a demonstration.

Using labcasts to make chemistry assessments more authentic

Shaun Mutter, Daniel Payne, Kate Nixon and Rob Janes, STEM

Labcasts, interactive live web broadcasts from a laboratory, give students insight in to how experimental investigations can be carried out. In S218 – Concepts in chemistry we have been using a synoptic labcast as the basis of the end of module assessment (EMA). The labcast exhibits multiple fundamental concepts covered in the module, where a molecule is synthesized and then different chemical aspects are explored. Several modules have linked labcasts to assessment and in S218 we have taken an approach to utilise all aspects of the live experiments in the EMA, to make the assessment as authentic as possible. This includes the live generation of “real” datasets, which are used for analysis and problem-solving tasks. Students interactively select experimental parameters for this data generation giving them direct input into their assessment. Students are also provided with a lab book template prior to

the labcast. This guides them to record observations, experimental variables, and their workings. The accurate recording of data is an essential skill within scientific disciplines, and this completed lab book comprises part of the EMA.

The synoptic experimental investigation demonstrates an approach to solving a real-world chemical problem. Combined with an EMA that the students have direct influence on and the demonstration of scientific record keeping skills has led to a more authentic assessment.

Lessons from teaching Environmental Scientists coding

Philip Wheeler, STEM

Keywords: Coding; Environmental science; Data science

We live in a data rich world. Environmental science is flooded with data from large databases of field records, environmental sensors and satellites. Teaching students the data science skills to deal with these data is critical to supporting their development as independent scientists in a time of rapid global change. However, students studying environmental science do not generally see themselves as data scientists. I developed a series of introductory coding tutorials for S226 Environmental Science students using the R programming language and delivered through the OpenComputing Lab. I will explain how these tutorials were developed and delivered and reflect on the experience so far.

Optionality in a Stage 3 emTMA

Tim Lowe, STEM

Keywords: Optionality; MST374; emTMA; Case studies

Computational Applied Mathematics (MST374) is a Stage 3 module whose final assessment is an emTMA. The module attracts a wide range of students with differing specific interests including applied mathematics, physics and data science. To meet the interests of this diverse cohort of students, the final (online) unit of the module presents a number (usually three) of Case studies applying and extending the methods taught in the module to a specific area of application. Students should study at least one Case study and then answer (one) extended emTMA question based on their Case study of choice. The Case study topics are rotated each presentation.

To enable efficient and effective marking, we attempt to ensure that each tutor only marks one topic, ideally their preferred topic.

In this presentation we will discuss how we manage and support arrangements to enable this optionality and specialist marking, which is not completely supported by University systems.

Building awareness of values in environmental managers: the experience with T330 Environmental Management: Pathways to Sustainability

Leslie Mabon, STEM

In this contribution, I share insights from presentation and first production of a new Level 3 module in environmental management, Environmental Management: Pathways to Sustainability (T330). The module intentionally

challenges dominant portrayals of the environmental manager as primarily a technically minded professional operating within formal institutional settings. While recognising the importance of technical expertise and regulatory roles, the module reframes environmental management as a diverse set of practices enacted across professional, community-based, voluntary, and digital spaces. T330 foregrounds the relationship between students' personal environmental values, lived experiences, and emotional responses to environmental change, and how these shape professional practice. What I'll focus on in this contribution is how we have sought to embed this within T330.

I will outline the suite of reflective and experiential learning activities embedded across the module to support this integration. These include, for instance, eco-anxiety questionnaires to prompt critical reflection on emotional dimensions of environmental work; use of e-journals to support reflexive practice; mapping personal development against competency framework for sustainable development; and case studies that engage not only with the technical and scientific issues at hand, but also draw in the personal and professional experiences of the environmental managers we interviewed for case study development and audio-visual content.

Whilst the module is still in early stages of presentation, I also hope to share some initial insight on how students have responded to our work to embed these issues in the curriculum. This, I believe, is especially important given T330 draws in students from environment and engineering backgrounds, who may not be so familiar with engaging in reflective practice across their student

journey yet will require these capabilities for subsequent careers in environmental management.

Beyond detection: strategies for assessment integrity in the GenAI era

Soraya Kouadri Mostéfaoui and Stuart Auton, STEM

Keywords: Assessment; AI; GenAI; Plagiarism

In this presentation we will present our evolving response to students' use of Generative AI in assessed work, outlining the strategies, challenges, and lessons learned along the way. While initial efforts in the school were modest in scope, with attempts made across a small number of modules, yielding varying levels of success. These early interventions reflected the broader uncertainty of the moment. Indeed, this period has been characterised by rapidly shifting policies that left module teams, tutors and students navigating a landscape of considerable ambiguity.

Despite this, academics within the School of Computing and Communication showed a genuine commitment to finding creative solutions, both in how they design learning experiences and in how they approach assessment. Rather than retreating to more traditional or restrictive practices, module teams have sought to engage thoughtfully with the opportunities that Generative AI presents, while remaining mindful of the challenges it poses to academic integrity and authentic assessment.

In this presentation we will try to capture that journey and reflect on what has been learned as the school continues to adapt and respond to the rapidly evolving landscape.

Parallel Session H

Learning from the OU Sustainathon: Employability Skills through Sustainable Design Challenge

Vera Hale[1], Emma Dewberry[1] and Georgina Hawkins[2], STEM[1], Academic Services[2]

Keywords: Workshop; Knowledge exchange; Employability Skills

This workshop and demonstration will provide a short showcase of the OU Sustainathon, sharing insights on embedding sustainable employability skills into the curriculum.

The OU Sustainathon is a collaboration between the OU Design Group, OU Careers and Employability Services, and two external charitable organisations. It challenges six groups of self-selecting students to tackle two sustainable design problems using a structured approach to design problem framing that supports collaborative design thinking. The event is interactive and rewarding, based on the one-day OU Designathon, where students and participating charities leave with unexpected outcomes. The first OU Sustainathon took place in June 2025.

The workshop ran for a week, with students committing to three days of activities. Two charities presented sustainability challenges they face, and 6 groups of participating STEM students (30 in total) worked on these real-world

problems, developing employability skills in the process. Student feedback highlighted the experience as highly rewarding.

By using the OU Sustainathon as a creative, distance-learning project template, this eSTEeM workshop aims to engage colleagues in sharing insights and exploring ways to better embed the development of sustainable employment skills opportunities for our students.

Parallel Session I

Decolonising Computing: Practical Steps for Inclusive Curriculum and Pedagogy

Zoe Tompkins, Amaninder Singh, Kate Feliciello, Brent Cunningham and Andrew Smith, STEM

Keywords: Computing; Pioneers; Decolonising; EDI; Diversity

This interactive hybrid workshop explores what it means to meaningfully decolonise computing education and advance epistemic justice within sociotechnical teaching and learning environments. Drawing on principles of critical pedagogy and design justice, the session examines how existing curricula can reproduce bias, limit student belonging, and reinforce inequities in participation and achievement. In response, we showcase emerging initiatives within Computing & Communications, including an audit of higher education decolonising activities and the development of a Diverse Computing Pioneers

Repository to broaden representation and provide counter-narratives to the dominant Eurocentric canon.

Participants will engage in hands-on activities both online and in room to apply these ideas in practice. Through collaborative remixing of pioneer profiles and designing micro-teaching activities, attendees will identify opportunities for embedding decolonial approaches within their own modules. The session concludes with individual action-setting to support sustained pedagogic change.

By the end of the workshop, participants will understand why decolonising computing matters, recognise areas within their curriculum where inequities manifest, develop at least one practical teaching idea using diverse role models, and commit to an actionable next step supported by shared resources.

Parallel Session J

The crucial role that scholarship of teaching and learning plays in Fellowship of the Higher Education Academy (HEA) applications

Janet Haresnape[1], Carina Bossu[2] and Sarah Daniell[1], STEM[1], IET[2]

Keywords: Recognition; Fellowship of the HEA; Scholarship; Influence; Teaching and Learning

OU employees are encouraged to get recognition for their excellence in teaching and supporting learning by applying for Fellowship of the Higher Education Academy (HEA), either through the Applaud (Accrediting & promoting professional learning and academic development) Scheme - for Senior Fellowship (SFHEA), Fellowship (FHEA) and Associate Fellow (AFHEA) Levels - or directly with Advance HE for Principal Fellowship (PFHEA) Level. Fellowship demonstrates a personal and institutional commitment to professionalism in teaching and learning in higher education. Across the four categories, from Associate Fellow to Principal Fellow, Fellowship provides individuals with professional recognition of their practice, impact and leadership of teaching and learning. Scholarship of teaching and learning plays an important part of many submissions, especially at SFHEA and PFHEA levels. An awareness of ongoing scholarship work is also important at Fellowship level (FHEA).

In this workshop we will consider examples of scholarship initiatives which would be appropriate to include in a Fellowship of the Higher Education Academy submission, in particular at SFHEA and PFHEA levels. The workshop will explore the extent of the influence and impact of each scholarship example considered. Scholarship which potentially influences the practise of other practitioners/colleagues could be appropriate to use as part of a SFHEA submission, and scholarship which is potentially of strategic influence across and/or beyond the OU could be considered as part of a PFHEA submission. This is a distinction which can be hard to grasp. This workshop will therefore be of particular relevance to those who are actively involved in scholarship, and who are considering gaining fellowship recognition and applying for SFHEA or PFHEA. It will include small group work in which participants share their own examples

of practice and discuss which submission level might be most appropriate for them and their current practice. With this discussion in mind, participants are encouraged to bring a short-written summary (100 words max) of each of their examples with them, for discussion in their groups.

Janet Haresnape (PFHEA) is an Associate Lecturer and retired Staff Tutor, who has mentored OU colleagues applying for fellowship recognition at all levels. Carina Bossu (SFHEA) was until recently Applaud Academic Lead and is still supporting the Applaud scheme and colleagues in other capacities. Sarah Daniell (SFHEA) is the Scholarship Lead in the School of Life, Health and Chemical Sciences, and is also an Applaud mentor. Between us, we feel well placed to comment on the level for which particular pieces of scholarship work would be appropriate.

Poster Presentations

How valuable are ‘quiet’ tutorials for Level 1 Interdisciplinary Environmental Science students?

Alice Fraser-McDonald, Maria Townsend and Kambiz Saber-Sheikh, STEM

Keywords: Accessibility; Online tutorials; Participation; Awarding gap; Retention

Attending live online tutorials can be challenging for some students, particularly those who are autistic, neurodivergent or have mental health conditions. Although attendance at tutorials is associated with improved module outcomes, anxiety around participation or social interaction may discourage engagement. This project investigates whether offering alternative online sessions, labelled as ‘quiet’ tutorials, encourages attendance and improves the student experience on U116, a level one interdisciplinary environment module.

Quiet tutorials were piloted during the U116 25B and 25J presentations and applied principles from ‘quiet hours’ and ‘relaxed performances’ in public spaces, as well as the findings from a classical studies ‘relaxed tutorial project’. The sessions incorporate a range of adjustments designed to reduce pressure and anxiety, including not being recorded, no expectation to use microphones or webcams, no breakout rooms, and regular breaks.

This project evaluates student attendance at the quiet tutorials. Surveys also ask students about their motivations for attending tutorials, whether they attended quiet (or other) tutorials, and what their experiences and the benefits

of these tutorials were. In addition, focus groups with tutors delivering the quiet tutorials capture their perspectives on the impact and value of these sessions.

This work aims to address the pass awarding gap for U116 students with declared mental health issues (34.2% and 20.7% for the 23J and 24B presentations, respectively) by offering alternative approaches to online tutorials. The findings will inform future U116 presentations and may contribute to improved rates of student completion and continuation by reducing tutorial-related anxiety.

See page 115 for poster

Transactional to Transformative: an evolution of the HE into FE partnership

Ian Bates and Gareth Neighbour, STEM

Keywords: Further Education; Higher Education; Access; Partnership; Transformation

This poster provides a reflective account of the experience of working with numerous further education colleges, helping to introduce new programmes of study. The validation process might at first seem transactional to many, such as providing these documents – programme specification, module descriptors, etc. - answering some queries, and then “we'll validate”. This is far from the truth. Further education has successfully delivered many qualifications, but these are often defined by others, such as Pearson, City & Guilds, etc. They are skilled in delivering efficiently, supporting students and working in sync with the local

economy, however, some of the nuances of higher education are often overlooked in further education. Working with further education colleagues, this poster tells the story of how, through collaboration, the transactional can become transformative in terms of teaching and assessment strategies, ultimately enhancing the student experience. The paper concludes by distilling key pieces of advice for those embarking on any work with further education colleges.

See page 116 for poster

AIDED – The AI Design Ed project. Practical application of AI tools in OU Design

AnnMarie McKenna and Catherine Scott, STEM

Keywords: Design process; GenAI; Creative agency

The AIDED project, in partnership with design students, explored the practical application of GenAI within existing OU design modules and assessed any relative advantages of GenAI image creation tools over conventional visual communication methods. The project had two research stages: A survey assessed student awareness and understanding of GenAI and a focus group where T217 students instructed Copilot to illustrate existing designs and visualise design problems, followed by reflective workshops.

The study centred on two pedagogical questions: whether students keep full creative agency when GenAI forms part of their assessed design process, and whether AI generated visuals can match or exceed the communicative value of

conventional techniques. Findings showed that students could effectively prompt Copilot to convey atmosphere, context, and broad conceptual direction, but often struggled to achieve precise, prompt specific representations. From a scholarly perspective, GenAI emerged as a valuable tool for generating visual context, and early stage inspiration, enabling students to critically evaluate output.

The project team recommendations are: Embed GenAI tools across Design & Innovation (D&I) and STEM curricula to enhance employability and process thinking. Develop and implement clear ethical guidelines and referencing practices for AI-generated visuals, including rationale and prompt documentation. Build on innovative design module guidance to support responsible use of GenAI in assessments and visual work. Promote fair access to AI supported visual communication, particularly for interdisciplinary STEM cohorts where design skills may be less developed.

See page 117 for poster

Does student knowledge and perceptions of AI use as a learning support tool align with academic staff approaches to embedding it in the curriculum?

Servel Miller and Jenny Duckworth, STEM

Keywords: AI; Curriculum; Student; Digital divide; Perception

A recent HEPI-Kortext, 2025 survey of over 1000 UK undergraduates found that 92% of students were using AI tools in their studies, up from 66% the previous

year (Freeman, 2025). However, institutional responsiveness has lagged, with another international survey indicating that 61% of lecturers have used AI in teaching (Digital Education Council, 2025). This mismatch suggests a widening gap between student expectations and institutional provision.

Compounding this challenge is a growing digital divide: access to AI tools increasingly depends on students' financial means and technological resources. The HEPI-Kortext survey shows that students from lower-income or less technologically equipped backgrounds use AI less frequently and feel less confident with emerging tools, highlighting an emerging disparity in AI-supported learning opportunities. Staff also experience uneven readiness, with confidence and understanding varying widely.

Our project explores both these challenges. Using student surveys, focus group discussions and academic staff interviews it aims to evaluate:

- How academic staff are embedding AI-related tools and activities to better engage students; their understanding of how AI can be used to engage students and their knowledge of implementing it in the curriculum development process;
- examine the benefits, barriers and challenges to using AI to engage students as perceived by academic staff;
- evaluate student knowledge, use/perceptions of the use and value of AI, training (if any) done and how they would like it to be used to support their studies in the future.

We will present our preliminary findings, discuss their implications and outline next steps with the project, including how we plan to disseminate our findings.

References:

Digital Education Council. (2025). Global AI Faculty Survey 2025. https://bpb-us-w2.wpmucdn.com/hawksites.newpaltz.edu/dist/7/800/files/2025/01/Digital-Education-Council-Global-AI-Faculty-Survey-2025.pdf.

Freeman, J. (2025). Student Generative AI Survey 2025 (HEPI Policy Note 61). Higher Education Policy Institute (HEPI) & Kortext. https://www.hepi.ac.uk/wp-content/uploads/2025/02/HEPI-Kortext-Student-Generative-AI-Survey-2025.pdf.

See page 118 for poster

Tackling illicit Generative AI use informally

Cath Brown, Andy Neate and Ruth Neal, STEM

Keywords: Academic integrity; Generative AI

Use of Generative AI tools is an educational hot topic. Whilst we should help students use such tools appropriately, guarding against usage that adversely impacts learning or invalidates assessment is crucial.

Gen AI has become increasingly competent in answering mathematical questions that test central content. The "arms race" in attempting to produce AI-proof questions has a real risk of distorting assessment and disadvantaging those students who attempt it in the way intended.

MST124 is often taken as a first OU mathematics module. Students typically find it demanding, and this can tempt them to use Gen AI illicitly. This can lead to

students becoming “locked in” to cheating; if they have not grasped earlier material effectively, they will not be able to assimilate later work.

We run a session for students illustrating how and how not to use AI in the module, and its benefits and dangers, but this is not guaranteed to reach all students. So, we are trialling an approach to tackling illicit AI use in TMAs. Relying on the Academic Conduct process unfortunately is not sufficient; it is too slow, meaning students do not have the opportunity to learn from their experience in a timely fashion, and it can also “criminalise” students unnecessarily, resulting in alienation. Our approach is: -

- For minor use, the AL warns the student
- For more significant first use, the student is invited to resubmit the TMA, on the assumption they may not have realised AI use was forbidden
- For a second instance of significant use, the student is invited to a conversation with the module team

The formal academic conduct process is available as a back-up, but by dealing with issues immediately, we aim to set students on the right path to study the mathematics effectively.

See page 119 for poster

Tracking Self-Efficacy in STEM: How Student Confidence Changes During Modules and Why It Matters

Sam Johnson, WELS

Keywords: Self-efficacy; Study skills; Student experience

Self-efficacy, or an individual's belief in their ability to successfully complete a task, is known to be associated with retention rates, student satisfaction, and success rates for students. Research has shown that building sources of self-efficacy into courses can improve self-efficacy for students, particularly if all four sources of self-efficacy are utilised; master experience (previous success), vicarious experiences (seeing peers succeed), verbal persuasion (supportive feedback from a trusted source) and emotional arousal (stress management). However, there is a lack of research that focuses on how self-efficacy fluctuates across a module in response to modular events. The current research explored how student's self-efficacy fluctuated across the first 14-20 weeks of study on two level one online STEM modules. Self-efficacy was scored using a 5-point Likert-style emoji scale. Mean scores per week and per task were compared to a baseline to identify self-efficacy fluctuations in the timeline and tasks associated with lower self-efficacy. Results showed there were comparable self-efficacy trajectories when comparing October and February intakes of students within modules, however results were not comparable between modules. Student's confidence often did not appear to compare accurately to their ability, suggesting they were not benefitting from mastery experiences as they were not recognising their own success. In addition, students lacked confidence with study skills, including time and stress management. In response, a tutorial was delivered focusing on time and stress management and received positive feedback. The research shows that simple data collection tools can provide valuable insights into the student experience, which can be used to design and implement simple interventions at optimum points in the module timeline to boost self-efficacy. As students appear to lose confidence at

different points across modules, there is value to exploring student's self-efficacy on individual modules, as opposed to generalising results across modules.

See page 120 for poster

Creating a sense of belonging.... one postcard at a time

Elouise Huxor and Theodora Philcox, STEM

Keywords: Belonging; Engagement; Tutoring; Connection; Design

A sense of belonging is widely recognised as critical for student motivation and retention, particularly in distance learning. Following the pandemic, completion rates on U101 Design Thinking: Creativity for the 21st Century, a Stage One design module, fell below comparable modules in the School of Engineering and Innovation. In response, two module team members explored practical ways to support belonging through regular, meaningful tutor–student contact, without increasing Associate Lecturer workload.

Building on U101's visual and creative practices, weekly digital postcards were developed by the two module team members who initiated the project. Each postcard provided concise, visually led prompts linked to the module planner, highlighting weekly key ideas, offering inspiration, and signposting the tutorial programme. Tutors sent postcards directly to their own students, maintaining a personal point of contact, with no additional teaching content included.

The intervention was piloted across 13 tutor groups using a mixed-methods approach, including learning analytics, student surveys, and tutor feedback.

Despite reaching less than a third of the cohort, completion rates increased by 2.4%. The postcards were subsequently rolled out across all tutor groups, with completion and retention continuing to show an upward trend.

Student feedback consistently highlighted the value of regular, predictable communication, with many describing the postcards as motivating and reassuring, and as helping them feel more connected. Tutors reported that the postcards supported more consistent contact with their groups, helped them stay aligned with weekly module content, and encouraged more casual conversations that might not have happened otherwise.

This poster will present the design, implementation, and embedding of the postcard intervention within U101, demonstrating how low-effort, visually led communication can enhance student engagement and belonging in distance learning contexts.

See page 121 for poster

Do Co-Created Digital Assets Contribute to Students' Sense of Belonging in LHCS?

Zoë Chapman and Janette Wallace, STEM

Keywords: Co-creation; Belonging; Community; APP; Student voice

Sense of belonging has been linked to improved student retention, attainment and satisfaction (Zumbrunn et al. (2014), Thomas L. (2021), Crawford, J. et al. (2023)), including within online learning environments (Thomas et al. (2014), Peacock, S. and Cowan, J. (2019)). In this project, we have engaged students as

interns via the STEM APP Virtual Internship Programme to co-create series' of digital assets for dissemination to students in LHCS with the objective of evaluating their impact on students' sense of belonging. The digital assets included a series of 12 postcards released monthly from September 2024 to August 2025, and five editions of a student magazine released quarterly from January 2025 to February 2026. In this poster, we present preliminary data from our student survey and analytics data from the web traffic to the host site. The data from both the survey and the web analytics explores how students engaged with the assets, and helps evaluate the impact of both the postcard and magazine series' on students' sense of belonging.

See page 122 for poster

From Pilot to Practice: Facilitating the use of a social virtual reality platform in LHCS

Lucy Anderson, Sarah Daniell, Janette Wallace and Trevor Collins, STEM

Keywords: Virtual reality; Learning events; Immersive learning; Tailored resources; Virtual learning environment

As a team we have demonstrated the benefits of introducing Virtual Reality (VR) tutorials alongside traditional Adobe Connect tutorials to both Stage 2 and Stage 3 Health Science students. Our initial projects used Mozilla Hubs or Frame VR to create immersive tutorials featuring 3D models of cells, sub-cellular structures and sensory organs. Positive feedback from students and tutors highlighted the potential of the VR space to foster a more social and informal

environment, which in turn enhances communication and understanding of complex concepts.

To build on these findings, we are promoting the use of the VR environment across a greater range of modules, qualifications and student and staff facing events. To facilitate this, we have created a suite of resources to be shared with staff and students. The "basic" guidelines focus on practical hints and tips to enable users to make the best of the VR environment (e.g., navigating the space, using avatars, engaging with 3D models and communicating). These instructions can be shared with students and aim to reduce technical barriers and build confidence using the VR platform as a learning tool.

"Advanced" guidelines are aimed at those users who will be hosting sessions. These materials include information about the types of interaction available, as well as suggestions for adapting pedagogy for the VR environment. By providing these tailored resources, we aim to empower hosts to create immersive, collaborative experiences that enhance learning outcomes and foster a sense of community. To ensure equity of use, we have developed a VLE where these resources are hosted, alongside an interactive calendar which enables users to directly book the VR space for teaching, workshops, and community-building events. This expansion aims to embed VR as a flexible, collaborative tool for learning and engagement across the school.

See page 123 for poster

Bespoke tutor-student allocation for Health Sciences students

Katie Acutt, Fiona Moorman and Sarah Daniell, STEM

Keywords: Tutor-student allocation; Student experience; Continuity, Student support, Retention

Students currently have little continuity of contact with their allocated tutors on the different modules throughout their qualification. Currently student retention on our BSc Health Sciences (Q71) qualification is concerning. In light of the University's priority to increase retention and continuation on qualifications, our project aims to undertake and evaluate a bespoke approach to tutor-student allocation (TSA) for a subset of Q71 students with a view to exploring whether providing continuity of academic support may have benefits.

We identified 110 Q71 students studying concurrently on more than one health sciences module at Stage 1 and /or 2. At 25J TSA, those students were allocated to the same tutor for both modules (student numbers and modules indicated below). Seven tutors tutoring on more than one of these modules are participating in this bespoke allocation.

- Numbers of students studying modules SDK100 25J and SK190 25J = 56 students
- Numbers of students studying modules S290 25J and SK297 25J = 43 students
- Numbers of students studying modules SK190 25J and SK297 25J = 11 students

We will present initial retention data for these students and tutor feedback on their experience of participating in this bespoke allocation. We will also indicate our 'next steps' for further evaluation of 25J student outcomes data, student and tutor experiences and our planned approach to 26J TSA.

See page 124 for poster

Students as partners to incorporate learning preferences and inclusivity into curriculum design and improve learning outcomes

Ruth Neal, Ellen Marshall and Emma Steele, STEM

Keywords: Students; Instruction; Participation; Diversity; Inclusive

This project investigates how students experience the instructional methods used in two undergraduate statistics modules (M140 Introducing Statistics and M248 Data Analysis) and how learning materials could better support an increasingly varied student cohort. The work forms part of the upcoming lifecycle review and places student voice at the centre of curriculum development.

Both modules currently rely heavily on traditional, mathematics-focused text, supported by separate computer books for teaching Minitab, a paid point-and-click statistical package. Through large-scale student surveys and focus groups. The study explores whether these approaches meet the needs of learners with different backgrounds, learning profiles and levels of confidence.

The research examines which aspects of the current format support or hinder learning, whether particular groups may be disadvantaged by existing materials, and how students would prefer to engage with statistical content in future.

Our key research questions are:

- Which aspects of the current learning format support or hinder student learning?
- Are particular groups disadvantaged by the current learning materials?
- What are the general preferences for learning going forward and are there particular group with different views?

See page 125 for poster

A survey of Stage 1 students on use of Generative AI and Argumentation

Nitu Bharati[1], Edsoulla Chung[2] and Paul Piwek[1], STEM[1], Hong Kong Metropolitan University[2]

Keywords: Generative AI; Argumentation

We will report on the results of a survey that has been created as part of the Digital Thinking Tools in Action project, under the umbrella of the Open Societal Challenges programme. Our project is a collaboration with Hong Kong Metropolitan University. We surveyed 281 Stage 1 students at the OU from a range of qualifications (on topics such as Computing & IT, Data Science, Engineering, Health and Social Care, Arts and Humanities, Combined STEM, Mathematics, Criminology and Language). The survey includes both closed and open-ended questions. Our poster will describe findings on students' beliefs about importance of argumentation for their academic studies and their self-assessment of producing strong arguments. Furthermore, it contains self-

reported usage of Generative AI in general and more specifically for Argumentation along with the frequency. The survey also explores the reasons for not using generative AI for academic studies. Among the many findings we will report, an interesting on related to this specific aspect is that the small proportion of students not using generative AI generally justified this in terms of principled reasons (e.g. ethical implications, worries that it will hinder learning or create a dependence) rather than practical issues with accessing or using the tools.

See page 126 for poster

Investigating students' perceptions of university communications

Victoria Pearson, Maria Velasco, Linda Moore and Alison Condliffe, STEM

Keywords: Communication; Engagement; Students as partners; Reflection; Continuation

Our previous work to understand passive withdrawals on S111 (Stage 1 introductory science module) identified that some students receive large numbers of diverse email communications from several different parts of the university.

Previous scholarship (Robson and Cook, 2015), which pre-dated MILLS interventions and the changing use of email, found that Stage 1 students over 31 weeks of study received the same numbers of emails as we identified some S111 students receiving before TMA01 was submitted. This could lead to students

missing key information, becoming confused by diverse messaging, overwhelmed by the volume of information and becoming less likely to read OU-related emails.

With recent changes to centralise student communications that have further limited the oversight of targeted email interventions by module teams, this project provides a timely investigation to establish whether the communications received by students are effective in supporting their studies on a module. In particular, it is important to understand how these communications may impact on the integration and engagement of students with the university as part of their first experiences as an OU student.

We have recruited students on each of S111 25J and 26B to complete reflective diaries of their perceptions of the communications they receive from the University. We are also recording the communications that are received for each to understand nuances, gaps, and map perception to process. We will present preliminary insights from this work.

See page 127 for poster

Exploring How Structured Engagement Opportunities Could Help Students Address Eco-anxiety Through Supporting Wellbeing and Fostering Community Building

Harriet Marshall and Yvonne Chakraborty, STEM

Keywords: Eco-anxiety; Community; Engagement; Sustainability

Focusing on OU students studying environment-related modules, this pilot study will investigate how online community engagement could act as an empowering intervention for students, particularly for those facing eco-anxiety.

Significant levels of eco-anxiety have been reported among students studying environmental subjects at The Open University (Patent, et al., OU 2024) with the authors recommending further exploration of supportive interventions for this cohort. Additionally, emerging scholarship suggests that eco-anxiety is influenced by the wider social and political contexts in which environmental issues are encountered (Hallmark, 2025) which are themselves subject to ongoing change and uncertainty. The idea of supportive spaces for discussing environmental issues, addressing eco-anxiety and motivating constructive responses ('climate cafes') are becoming established (De Jong et al 2025). In the distance learning context, these spaces could be established online to provide support and facilitate sharing of experience, knowledge and coping strategies, with the aim of building community and positively influencing students' wellbeing.

Our poster introduces the project, explaining the rationale and the methods we are proposing to investigate 'What role do School-wide online discussion sessions on environmental themes play in building supportive communities and managing eco-anxieties?

Linking to the conference theme of Sustainability, this poster will explain our use of the existing EEES online community space to run several moderated student discussions around environmental themes and detail our proposed data collection methods.

The anticipated outcomes from this pilot study are qualitative and quantitative data on the impact of such structured discussions on student wellbeing and sense of community, and recommendations on the most effective formats for engaging students and having meaningful discussions. This information could be used to determine the viability of larger scale trial of this approach, with a view to formal establishment of online environmental engagement sessions.

References:

De Jong et al (2025) 'Climate cafés as a space for navigating climate emotions: a scoping review' The Journal of climate change and health. Available at: https://doi.org/10.1016/j.joclim.2025.100466. Accessed: Nov 2nd 2025.

Hallmark (2025) 'Beyond depoliticization and divisive antagonism: rethinking fear, anger and anxiety in environmental politics' Earth System Governance. Available at: https://www.sciencedirect.com/science/article/pii/S2589811625000606. Accessed Jan 30th 2026.

Patent et al (2024) 'Eco-Anxiety in Distance Education Students. Pan University / Cross Faculty Scholarship Final Report. The Open University. Available at: Ecoanxiety PAN UNI final-report-2024_SUBMITTED.docx. Accessed: Jan 30th 2026.

See page 128 for poster

Evaluating the Programming for Physical Sciences website and forums on SM123 Physics and Space

Andy Diament, Gemma Warriner and Stella Bradbury, STEM

Keywords: Programming; Python; Forum; Physics; Space

Physics and students need to learn to program in Python to analyse data and model phenomena. They start this journey on SM123 Physics and Space, returning to it in later modules. Many find it difficult and frustrating to learn programming. An earlier eSTEeM Study (Warriner and Diament, 2021) surveyed students on the module and identified areas where students were making poor progress or lacked confidence. This led to a further project to write additional support material for the VLE Website, Programming for Physical Sciences.

This poster describes a follow-on project. We have investigated patterns of website use by analysing access logs, to understand which resources are used and when they are used. We ran a survey of students using the site to learn more about how they use those resources. We have used quantitative analysis of forum posts across two presentations, which allowed us to compare the use of a public forum with a private one.

Reference:

Warriner, G. and Diament, A. (2021) How successfully are students engaging with the Python Component of SM123? Available at: https://www5.open.ac.uk/scholarship-and-innovation/esteem/projects/themes/supporting-students/how-successfully-are-students-engaging-the-python-component (accessed 29/1/26).

See page 129 for poster

Fixing Broken Content Access: A Design-Led Solution

Stuart Auton, STEM

Keywords: Online learning; Third-party content; Enrolment; Student support

In blended and online learning environments, access to course materials often depends on students enrolling in the correct version of third-party online classes. When this process is misunderstood or inconsistently followed, even well-designed learning materials can become inaccessible, leading to frustration, increased support requests, and perceptions of poor course design.

This case study examines an issue within the first presentation of TM252 Web Technologies where approximately one third of students either failed to enrol in the required version of an online class or enrolled in an incorrect version, resulting in broken links within Block 1. Despite the provision of written guidance, these errors persisted and generated significant complaints from both students and tutors.

To address this issue, two complementary interventions were introduced. First, illustrated, step-by-step enrolment instructions were added to the Module Guide, explicitly mapping the required actions students needed to take and visually distinguishing the correct class version from common incorrect options. Second, an 'enrolment checker' tool was built for tutors, enabling them to quickly verify whether individual students were enrolled in the correct online class. This tool supports rapid diagnosis of access issues, reducing reliance on trial-and-error troubleshooting and centralised technical support. The tool

brought together data from three discrete sources to achieve the desired overview.

This poster highlights the design rationale behind both interventions and summarises their impact on student experience and staff workload. Early indicators suggest a reduction in access-related queries, faster resolution of reported issues, and increased tutor confidence in supporting students with technical problems. Importantly, the approach reframes access errors not as student failure to follow instructions, but as a design problem that can be mitigated through clearer affordances and better diagnostic support.

The case contributes to ongoing discussions around inclusive digital learning design, staff-student partnerships in troubleshooting, and the value of lightweight, context-specific tools in improving the reliability of online learning ecosystems. The strategies presented are low-cost, adaptable, and transferable to other courses that rely on external platforms or multiple enrolment pathways.

Note: By the time of the eSTEeM conference, we will have completed Block 1 and returned the majority of the marking of TMA 01.

See page 130 for poster

Researching student barriers and enablers: a reflection on the role of research ethics

Chris Corcoran, STEM

Keywords: Ethics; Disability; Barriers; Enablers

This poster focuses on the theme of inclusion and exclusion in education drawing on three research projects two supported by eSTEeM and a third pan-university project; these projects explore cultural and social barriers and enablers experienced by our students as they make their transition to university and a smooth transition is important as it is associated with high levels of retention, progression and achievement. This poster looks at three projects focussed on barriers and enablers, or what helps and what stops, student achieve: the first project looks at the barriers and enablers of students in E&I as they began their studies; the second looks at the support mechanisms and connections that students use as they begin their learning; and the final project looks at barriers and enablers that students with mental health issues encounter as they become students at the Open University. These projects are very important as they focus on students who may be from different socio-economic backgrounds or who experience some kind of physical or mental health disadvantage. Given that these students are more vulnerable it is important that the research process follows the appropriate research protocols and codes of practice that demonstrate research integrity. The poster concludes with a short reflection on the importance of being an ethical researcher.

See page 131 for poster

Parallel Session K

Investigating and supporting skills development needs for students transitioning between stages 1 and 2, and 2 and 3 in environmental sciences

Christopher Hutton, Fiona Aiken and Iris Verhagen, STEM

Keywords: Skills; Development; Science; Progression

With ever increasing focus on the need to support progression in our diverse student body, we are seeking to identify the most important skills gaps that present challenges to students on environmental and Earth science modules in EEES as they move from stage 1 to stage 2 and from stage 2 to stage 3. There is considerable anecdotal evidence from our ALs that students often arrive at their next stage of study with skills gaps and anxieties (e.g., maths and statistics, scientific report writing).

We are focussing on transitions from stage 1 to 2 and then 2 to 3, after students have completed the curriculum that should prepare them for moving up to the next stage. Our aim is to look at the skills required for transition in a broad sense, and we hope that our findings will help to inform support initiatives and the production of new curriculum both in our School, and more widely across our undergraduate Science and STEM curriculum.

In our presentation we will share initial findings from focus groups with staff who support students at stages 1, 2 and 3 in Earth and environmental sciences. We will facilitate a discussion around our key findings and how they can be shared more widely across the STEM curriculum.

Identifying and supporting maths anxiety

Susan Pawley, Nicola McIntyre and Becca Whitehead, STEM

Keywords: Maths anxiety; Student well-being; Positive study habits; Learning support strategies; Motivation

Studying subjects that contain maths can evoke a wide range of emotions. Whilst some students enjoy the challenge others may start to panic, leading to physical or psychological signs of stress. These negative feelings can create a cycle in which anxiety prevents them from studying maths effectively, which in turn increases the anxiety. This struggle can affect all aspects of study or may be limited to certain maths topics or time periods. When the student is aware that they may become anxious, they often take steps to avoid engagement or display other signs that undermine progress.

During this interactive presentation we will immerse ourselves in why and how these anxieties arise. Looking at the effect they have on both body and mind. We will ask attendees to put themselves in the position of a student with maths anxiety drawing on their own experience of situations that make them anxious. Highlighting the similarities and differences between general and specific anxieties, we will examine key indicators such as avoidance behaviours, procrastination, emotional responses, and negative self-perception.

We will introduce our Open Learn course which takes students on a step-by-step journey through the DEAL process (Describe, Explore, Act and Learn) which is an attainable way for students to work though maths anxiety and find strategies that will help them succeed. By giving an overview of the course, we will highlight the strategies we are encouraging students to use, some of which may be of interest to attendees to add to their own toolbox of methods to overcome anxieties. The session will show how small but purposeful changes in practice can have a meaningful impact on student outcomes and overall well-being.

We will draw the session to a conclusion by looking at how some students within the STEM faculty have benefited from using these and other resources.

Understanding students' emotion regulation when learning online

Jake Hilliard[1], Karen Kear[2] and Helen Donelan[2], LDS[1], STEM[2]

Keywords: Emotion regulation; Online learning; Distance education; Digital tools

Emotions play a central role in students' learning, academic achievement, and overall wellbeing. While research increasingly recognises the importance of emotions in higher education, comparatively little is known about how and why students regulate their own emotions—or those of others—within online distance learning environments. Drawing on emotion regulation theory and research on emotions in learning, this work addresses this gap by exploring the emotion regulation practices of undergraduate STEM students studying online at The Open University (OU).

The study employed a mixed-methods, survey-based design involving 92 undergraduate STEM students. The survey explored how and why students regulated their own and others' emotions while learning online, how emotion regulation in online contexts compared with in-person learning, the role of digital tools and technologies in supporting emotion regulation, and students' perceptions of the types of support they would find most helpful. Quantitative survey items were complemented by open-ended questions to capture students' experiences and perspectives in greater depth.

Findings indicate that most students actively sought to regulate their own emotions during online study, particularly anxiety, frustration, and feelings of overwhelm. In contrast, regulating others' emotions was far less common, with many students reporting that they never attempted to do so. Tutors were perceived as playing a more prominent role in students' emotion regulation than peers, highlighting the importance of tutor–student interaction in providing emotional support. Students reported mixed experiences regarding how challenging it was to regulate emotions in online compared with in-person learning contexts, identifying both constraints (such as isolation and limited immediacy of support) and affordances (including flexibility and greater control over learning). A wide range of digital technologies were used to support emotion regulation, most frequently music and video streaming platforms and external communication tools. Many students also expressed a clear desire for additional emotional support, particularly through more regular tutor check-ins, improved communication, and greater access to mental health and wellbeing resources.

In this interactive session, participants will be invited to reflect on the role of emotional processes in online learning contexts, drawing connections between the findings presented and their own experiences or practice. Intended learning outcomes include:

1) developing an understanding of how and why undergraduate STEM students regulate emotions in online distance learning environments;
2) recognising the role of tutors and digital technologies in supporting students' emotional regulation and wellbeing; and
3) identifying practical implications and potential strategies for enhancing emotional support and emotional resilience.

Parallel Session L

Patterns of Inequality in STEM Degree Awarding for LGBTQ+ Students in Distance Learning

Willow Neal[1], Emmanuel Zuza[2], Kat Gauld[1], Elaine McPherson[1], Christopher Hutton[1] and Ellesar Elhaggag[3], STEM[1], FASS[2], WELS[3]

Keywords: LGBTQ+; Awarding gap; Equity; STEM; Diversity

Distance learning is frequently presented as an inclusive route into STEM higher education, particularly within open-entry institutions such as the Open University (OU). In higher education, an awarding gap describes persistent differences in degree outcomes between groups of students. Despite growing interest in LGBTQ+ experiences in higher education, there is currently no

published empirical research examining awarding gaps for LGBTQ+ students in STEM, or within distance learning contexts. As a result, inequalities linked to sexual orientation and gender identity often remain invisible within institutional and pedagogical discussions of equity.

This talk presents findings from the first phase of an eSTEeM-funded scholarship project analysing ten years of institutional awarding data for STEM degrees at the OU. Using proportional odds regression, the analysis examined patterns of final degree classification for LGBTQ+ and heterosexual students across the full degree classification scale. The results show a clear and consistent awarding gap. Across the full range of degree classifications, LGBTQ+ students are systematically less likely to be placed into the higher degree categories than heterosexual students, with the scale of this disadvantage equivalent to around 55%. This reflects a large, system-wide difference in outcomes rather than a statement about individual performance or probability.

Alongside presenting these findings, the session will include short, structured opportunities for audience reflection on whether, and how, considerations of sexuality and identity feature within their own teaching practice, and whether the results prompt any reconsideration of current approaches. The talk will also briefly explore the limitations of institutional quantitative data, including under-reporting of LGBTQ+ identities, and how these constraints shape what such analyses can and cannot reveal about student experience.

The session will then outline a second, planned phase of the project, which will engage LGBTQ+ students directly to explore how identity, representation, and experiences at the OU shape learning and academic outcomes from the

student perspective. A final reflective activity will invite participants to consider how qualitative, student-centred approaches to discussing identity have been approached in their own research, and what methods might be effective for future scholarship.

Framed within the conference theme of Stepping Back and Stepping Up, the session demonstrates how institutional data can be used to surface inequalities and invites reflection on how future research might responsibly engage student perspectives to better understand these patterns.

Postcode Inequity: Closing the Awarding Gap for Stage 1 STEM Students residing in our most deprived UK postcodes

Louise MacBrayne, Jennie Bellamy, Isabella Henman and Kate Gibson, STEM

Keywords: Awarding gap; IMD; Socioeconomic status; STEM; Stage one

The STEM faculty has identified the awarding gap between IMDQ1 and IMDQ5 (most and least deprived) UK postcodes as a priority under APS (Access Participation and Success) criteria. We have identified that Gateway STEM modules in Science (S111 and SDK100) and Environment (U116), have awarding gaps between 10% and over 25% depending on module and presentation.

This presentation will disseminate the findings and recommendations from a recently completed eSTEeM project, which investigated the awarding gap for students based on socio-economic status at the time of study. During the project we compared the 3 science modules with 2 modules from Engineering and Innovation (T192, T193) and 1 gateway design module (U101) by to see if the

same issues faced by our Gateway Stage 1 Science modules are more widespread across STEM.

We will report findings from a survey sent to IMDQ1 and IMDQ5 students that explored their study experiences and circumstances surrounding their study, together with outputs from follow-up 1:1 interviews with those students willing to speak direct to the project team to develop a better understanding of the barriers faced by the students. An immersive activity will focus on the key themes identified around community, study space, belonging and confidence.

We will also report findings from a parallel intersectional study for IMDQ1 and IMDQ5 students with other characteristics such as ethnicity, caring status, employment status and study intensity.

Using the themes identified from the data gathered, the project team will outline recommendations for any module-specific interventions (production and presentation) to improve study experience for students living in our most deprived UK postcodes.

Progression of OU STEM students from taught courses to postgraduate research – motivations and barriers

Alice Fraser-McDonald, Sally Jordan, David Sharp and Teresa Sides, STEM

Keywords: Postgraduate research; Student progression; Barriers to progression; Graduate outcomes

In parts of the Higher Education sector, there is often a well-established pathway for students to progress from taught courses to postgraduate

research within the same institution. However, at The Open University (OU), it is widely perceived that relatively few STEM postgraduate research (PGR) students have previously completed a taught qualification with the University, compared to other institutions. We have investigated the current progression of OU STEM students from taught undergraduate and postgraduate courses to postgraduate research, including variation across Schools, student characteristics, and modes of study. We also explored the factors influencing students' decisions to pursue, or not pursue, this pathway.

A mixed-methods approach was used, combining institutional data with surveys and student interviews. The institutional data enabled a quantitative assessment of current progression rates for OU STEM students, previously shared at the 2025 eSTEeM conference. Surveys and interviews provided qualitative insights into student motivations, awareness of PGR opportunities, and perceived barriers to progression. These findings form the main focus of this presentation.

This session will summarise the key findings of the project, including rates of progression along the pathway from taught study to postgraduate research, as well as the motivations and barriers identified by students. The session will also discuss the main recommendations arising from the project and potential strategies for mitigating barriers to progression.

By the end of the session, participants will have an understanding of current progression rates of OU STEM students from taught courses to PGR at the OU and how these vary by student characteristics and mode of study. Participants will also gain insight into the barriers faced by students considering this

pathway and will be invited to discuss follow-on actions to help address these challenges.

Parallel Session M

Guiding students in the use of GenAI for study support

Emma Steele, Carol Calvert, Alison Bromley and Ruth Neal, STEM

Keywords: Generative AI (GenAI); Student learning support; Technology-enhanced learning; Responsible AI use

This talk will invite participants to think about the advantages and disadvantages of student use of GenAI in their study, alongside the positive ways in which students can utilise GenAI to enhance their own learning.

There is enormous potential for students to use GenAI as a support tool in their learning. Responsible and appropriate use of GenAI can positively impact student confidence, engagement and employability.

An important delivery mechanism for supporting students in the use of GenAI for learning is through ALs working with students at the module level. However, it remains a challenge for ALs to simultaneously deal with their own perceptions of GenAI alongside guiding students. A clear understanding of the benefit to students in technology enhanced learning will be key to ALs willingness to engage in change.

The talk will outline the findings of an investigation into student and AL positioning on the use of GenAI. It will also explore how module teams and ALs can support students in effective and responsible use of GenAI in their studies.

Our findings include that, for example, we know Economics and Open degree students are more likely to use GenAI to help them understand module materials compared to students on a maths or statistics qualification. A focus group held with students highlighted that students listen and learn from other students, and we have initiated a student-led thread, recruiting students to creatively design and development of resources for the productive use of GenAI.

We'll also demonstrate how the module M248 Analysing Data is integrating tuition support for GenAI as a study aid, through written guidance, tutorial-based work, and assessment questions.

You are not alone

Hayley Ryder and Tacey O'Neil, STEM

Keywords: GenAI; Retention; Study-buddy

There is evidence that using GenAI can reduce isolation [I, 2025] and support learning [Ga, 2025], but that it may be harmful rather than helpful when users rely on it for extensive cognitive offloading [Gb, 2025].

In M840, a dissertation module, students who submit a dissertation usually pass, yet about a third of starters never submit, with many reporting feeling isolated whilst studying.

We consider GenAI use as a "study buddy" via an “outsourcing” lens [C, 1998].

The student journey through assessment has always involved supports that both reduce extraneous cognitive load [S, 2010] and improve their work without replacing disciplinary thinking (e.g. calculator use, paid thesis-typing) [T, 2009]. We ask which aspects of creating an assessment can be outsourced to GenAI without affecting the students’ meeting of learning outcomes. We also consider whether GenAI use in this way can provide emotional support.

Work in progress: we are developing a GenAI “study-buddy” intervention, where GenAI use is permitted. Students are taught a prompt–critique–revise cycle: generate a draft; interrogate it for accuracy and fit; revise using their own mathematical judgement; and acknowledge GenAI use appropriately. The intervention includes integrity guidance, attribution examples, and informal online lectures [R, 2025] demonstrating GenAI use. Evaluation will consist of surveys and interviews on writing progress and perceived isolation/companionship.

The session has three parts:

1. Introduction of the topic and our theoretical framework along with a summary of what we have done so far.
2. An interactive activity in which delegates explore which elements of typical STEM assessments could be “outsourced” or supported by GenAI without compromising the intended learning outcomes.
3. Finally, a live participatory demonstration showing how an AI can support essay writing (on a topic chosen to be unfamiliar to the delegates) so that

participants can see an example of an artificial “study buddy” in action. During this demonstration we will explicitly surface the emotional support aspect of GenAI by demonstrating, in real time, the kinds of supportive, confidence-building interactions a “study buddy” can offer, illustrating how structured use can provide emotional as well as practical benefits.

The intended learning outcomes for participants:

Participants will be able to: map learning outcomes to “safe to support” task components; describe an integrity-aware iterative GenAI workflow; and identify wellbeing-positive uses of GenAI that may support continuation in project or essay-style modules.

References:

[C, 1998] Clark, A. and Chalmers, D., 1998. The extended mind. analysis, 58(1), pp.7-19.

[Ga, 2025] Gökoğlu, S. and Erdoğdu, F., 2025. The effects of GenAI on learning performance: A meta-analysis study. Educational Technology & Society, 28(3).

[Gb, 2025] Gerlich, M., 2025. AI tools in society: Impacts on cognitive offloading and the future of critical thinking. Societies, 15(1), p.6.

[I, 2025] Indrayanti, I., Salsabila, A.K., Amrita, V., Alhaddad, M.M., Saskia, A.B. and Ramadhani, D.P., 2025. PsyBot: A Randomized Controlled Trial of WhatsApp-Based Psychological First Aid to Reduce Loneliness Among 18–22-Year-Old Students in Yogyakarta, Indonesia. SSM-Mental Health, p.100504.

[R, 2025] Ryder, H, O'Neil T, 2025 Use of OULive recordings of `live mathematics' and discussion forums on a level 3 Pure mathematics module in order to enable students to move to a growth mindset in maths and to add a social dimension to learning mathematics (eSTEeM).

[S, 2010] Sweller, J., 2010. Element interactivity and intrinsic, extraneous, and germane cognitive load. Educational psychology review, 22(2), pp.123-138.

[T, 2009] Tajuddin, N.A.M., Tarmizi, R.A., Konting, M.M. and Ali, W. .Z.W., 2009. Instructional efficiency of the integration of graphing calculators in teaching and learning mathematics. International Journal of Instruction, 2(2).

Automatic reference checker to save time and support ALs

Mark Hintze, Janette Wallace and Karen New, STEM

Keywords: Feedback; Time; Reference checker; AL Support; Academic integrity

Accurate referencing is a core academic skill, however students at all stages continue to express they find this skill difficult. Alongside this, Associate lecturers (ALs) report that assessing reference lists to offer personalised support and guidance is time-consuming, particularly in large, research-based modules such as S390, which can include reference lists longer than 30 articles. This challenge has been amplified by the increasing use of generative AI, which can produce superficially plausible but non-existent references. In response, we have developed Agent Ref, a lightweight reference-checking tool designed to support ALs and module teams as a teaching and learning resource.

Agent Ref analyses student reference lists and classifies entries into three broad categories: verified references that exist and are appropriately formatted; suspicious references where issues prevent complete verification; and references that are likely to be non-existent. The tool uses automated matching against external bibliographic sources. Each reference is checked against these sources and assigned an accuracy score, which determines its classification.

The output from Agent Ref is a clear, interpretable report enabling ALs to quickly identify references that do not conform to the cite them right style. Importantly, the tool itself is framed to support constructive feedback conversations about referencing practice. While it can also provide module teams support when potential academic misconduct is suspected.

The tool will be piloted within S390, where students submit a 5,000-word research report. Around 90 ALs across the S390 science project module (Biology, Chemistry, Environmental science, Geosciences, Health sciences, and Physics) will have access to Agent Ref during 26B. The pilot aims to explore whether the tool reduces the time and cognitive burden of reference checking for ALs and supports more effective feedback on referencing practice. Evaluation will focus on AL perceptions of usability, trust, pedagogical value, and qualitative reflections on marking and student support, using strand-level surveys.

In the interactive session we will demonstrate the tool after engaging the audience in a discussion on how reference lists in submitted work are checked for accuracy against the cite them right style. Following the demonstration, we will offer the participants the opportunity to interact with a version of the tool

live. This will allow us to gather suggestions and critiques that will help us develop the tool further and expand its possible use across the university.

Poster 1

How valuable are 'quiet' tutorials for Level 1 interdisciplinary environment students?

Alice Fraser-McDonald, Maria Townsend, Kambiz Saber-Sheikh

The Open University

'Quiet' tutorial – students are told they are not expected to engage directly

✓ no recording ✓ no breakout-rooms ✓ no cold-calling ✓ regular breaks ✓ no expectation to use microphone or webcam

Background

- Applying principles from 'quiet hours', 'relaxed performances', and the 'relaxed tutorial project' (Fraser et al., 2025) to a Level 1 interdisciplinary environment module
- **U116** quiet tutorials designed to encourage students with mental health issues, autism, and/or anxiety to attend tutorials
- Addresses tutorial anxiety and pass awarding gap for students with declared mental health issues.

Methods

- Student surveys: 25B (n=28) and 25J (n=41)
- Two Associate Lecturer focus groups (4 ALs).

> The quiet tutorial format created a calmer and less pressured learning environment, which made it easier to focus and process information at my own pace.
>
> **U116 25J student**

Findings

- All surveyed students who attended U116 quiet tutorials (n=33) rated the experience as 'very positive' or 'positive'
- Reduced anxiety in relation to attending tutorials:

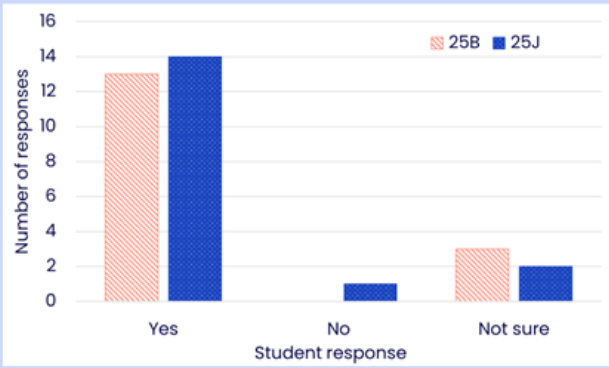

Figure 1 Student survey responses on whether quiet tutorials helped to reduce anxiety in relation to attending tutorials.

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Fraser, C. B., Yamagata, N. and Mac Mahon, A. (2025) 'The Relaxed Tutorial Project: distance learning and anxiety in Classical Studies', *Journal of Classics Teaching*, 26(51) pp. 94–98, Available at: https://doi.org/10.1017/S2058631024001004.

Poster 2

Transactional to Transformative
An evolution of the HE into FE partnership

Ian Bates, Gareth Neighbour

The Open University

Introduction

- Transition from HE to FE partnerships represents a significant opportunity to broaden access and enhance the student experience.
- We present a reflective account of our work with FE colleges exploring both the challenges and transformative potential of these collaborations.

Challenges

- Transactional, e.g. programme validation can seem procedural, and document-driven
- Provision is often shaped by external awarding bodies such as Pearson or City & Guilds.
- HE norms can be difficult to relate to the FE experience. Transpose over transform.

Creating Engagement

- Building upon the university's approach to validation and academic reviewing, further engagement was achieved by working collaboratively to create authentic learning relevant to local needs.

Lakes College Cumbria – Nuclear Manufacturing

Middlesborough College – Construction

Hopwood Hall, Manchester – Manufacturing

Nottingham College – Manufacturing & Electrical

Yeovil College – Aerospace / Aeronautical

Transformative Potential

- FE colleges have a strong history of delivering qualifications efficiently and supporting students. These frameworks, while robust, can limit flexibility and innovation.
- Consequently, some of the distinctive features of higher education—such as scholarly engagement, critical thinking, and nuanced approaches to assessment and feedback—are not always fully embedded within the FE context.
- Feedback from the collages and from local employers said that although there were some transitional challenges to navigate as students adapted to a less structured approach, HE formative feedback was helping students develop more thoughtful, flexible, thinking, with students able to problem solve and interact with the challenges faced in industry with a more mature outlook.

Conclusions

- Our experience demonstrates that collaboration has transformed the dynamic and that working closely with FE colleagues, we have seen how a process that initially appeared administrative can evolve into a shared journey of pedagogical development, while respecting the strengths of the FE delivery models.

Acknowledgements

Thanks go to Open University Validation Panel for supporting this work and the many members of staff and students at the colleges involved in the HE to FE Programme.

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Poster 3

AIDED – The AI Design Ed project

Practical application of AI tools in OU Design modules

Catherine Scott & AnnMarie McKenna

Adventures in Copilot whispering - a blog

The Open University

What we did and why

Test Copilot as a tool for visual communication in design for comparative analysis with traditional methods.

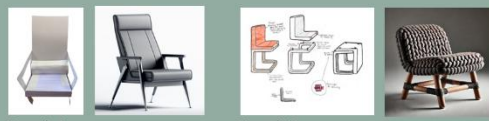
How we did it

Tasking level 2 design students to use Copilot to visualise their final concept and design problems followed by reflective workshop sessions.

Traditional visual communication vs Copilot


Example A

Example B


Example C

Example D



Example E

Since the original student task in 2024, rapid advances in AI have enhanced Copilot's image-based design capabilities, enabling image uploads as prompts to refine sketches and presentation.

Copilot generated visuals quickly but struggled with abstract or multifunctional designs. Students experienced frustration due to prompt complexity, and limited creative interpretation.

Overall, students viewed GenAI as a complementary tool, useful for fast starting points and polished contextual images.

Key takeaways:

- Good with simple design.
- Students retained creative control.
- Works alongside traditional tools.
- Conventional bias.
- Prompt sensitivity.

> Technology continues to evolve and as aspiring designers, so should we.

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Capable of nuance when communicating the 'sense' of a problem


A small change to the prompt significantly altered the impression conveyed:

Left prompt:
person living in a city who wants to start growing vegetables in their home.

Right prompt:
person in a flat living in a city who wants to grow vegetables but doesn't know how

Findings

Copilot can convey general problem context effectively.

Exact visual replication from specific text-based prompts was challenging.

AIDED report and references

Poster 4

Does student knowledge & perceptions of AI use as a learning support tool align with academic staff approaches to embedding it in the curriculum?

Servel Miller, Jenny Duckworth

The Open University

Introduction

- Around 90% of HE students are using AI to support their learning and want it further integrated into curriculum (DEC, 2024; Studiosity, 2024).
- Possible different picture at OU, with 28% declaring use of AI to improve understanding about a topic area (OU, 2025).
- Our project evaluates student knowledge, use/perceptions of use and value of AI, training needs and how they would like it to be used to support future studies.

Approach

- Student survey (S112, S226; S319; S397) - 103 responses.
- Follow up focus groups (5 students) led by student partners.

Initial findings

Some respondents stated **benefits** of AI as a:

- tutor-like support tool
- way of explaining difficult concepts differently
- time-saving aid e.g. for revision, summarisation, grammar and coding.

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AI as a *personal tutor*

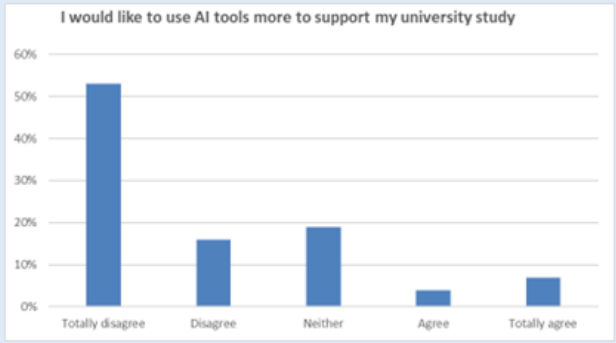
"another way of explaining"
"like asking a tutor or another student"
"immediate feedback instead of radio silence"
"available outside tutor hours"

Other respondents are **strongly opposed**, often on:

- ethical grounds (plagiarism, environmental impact)
- concerns about erosion of critical thinking
- mistrust of accuracy and lack of citations.
- More than 50% do not want to use AI to support their study.

Some respondents occupy a **conditional middle ground**

- AI is acceptable as a support tool, but not as a source of answers.
- Value depends entirely on regulation, transparency, and pedagogy.



Discussion/conclusions

- Strong polarisation in views.
- Large proportion of students surveyed indicated resistance to Gen AI.
- Could OU (Environment and Earth Science) students be different in this respect to HE students elsewhere?

Next steps

- Interviews with academic staff.

•[DEC] Digital Education Council (2024) *Global Student AI Survey: AI's impact on the future of Higher Education* https://www.digitaleducationcouncil.com/post/digital-education-council-global-ai-student-survey-2024
• OU, (2025) Student Experience od Feedback, Assessment and Revision (SEFAR) undergraduate Survey 2025: OU key Insights; Ed: Cross, S. and Brasher, A,
•Studiosity, (2024) UK Student Wellbeing SurveyAvailable from: UK Student Wellbeing Survey 2024.pdf

Poster 5

Tackling Illicit Generative AI Use Informally

Cath Brown, Andy Neate, Ruth Neal (School of Maths & Stats)

The Open University

The problem

- Gen AI use is growing exponentially… and it's increasingly good at maths!
- But if students use Gen AI to do their TMAs, they do not learn the maths.
- And if they use it early on, they can't "recover" later as they don't have the foundations for later study.
- So Gen AI use at level 1 stores up trouble for the whole degree.

Why not use the Academic Conduct process ?

- The ACO queues are huge and so there is always a delay…
- … but even if not, it still takes time for a case to be resolved.
- … and by then the student is "locked in" to cheating.
- Students who go into the academic conduct system may also develop an adversarial relationship with the University, which can create problems with help and support seeking.
- Lower stakes interventions mean ALs are more likely to report suspicions

What are we doing?

On MST124 and M140, we are referring for Academic Conduct only as a last resort:

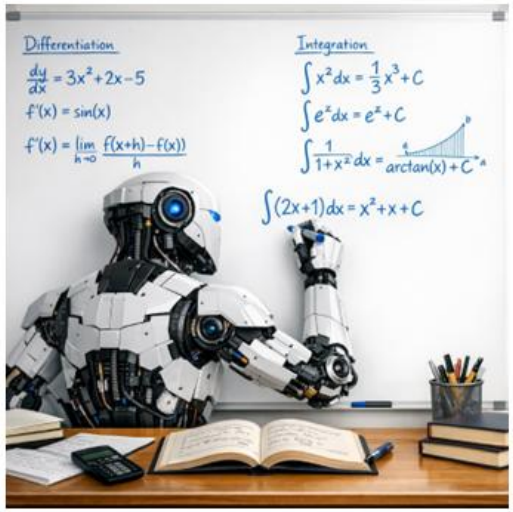
- For a very minor amount of suspected Gen AI use, AL makes it clear on the PT3.
- For a first instance of more substantial suspected use, student is offered chance to resubmit.
- For a second offence involving substantial suspected use, student is invited for a "conversation" with the module team.

How will we evaluate success?

We are keeping a record of all AI-related interventions and are monitoring:

- The number of "reoffences".
- Retention figures.
- Whether these students go on to use AI illicitly in future modules.

We will also collect feedback from ALs; initial comments refer to the workload, but also the benefits of clarity and feeling able to do something about cheating.



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Poster 6

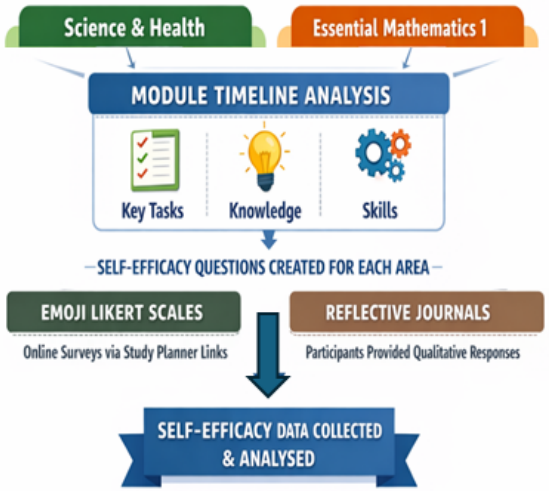
Tracking self-efficacy in STEM: How students' confidence changes during modules and why this matters

Sam Johnson

Self-efficacy (S-E), or an individual's belief in their ability to successfully complete a specific task (Bandura, 1997).

Aims: Explore how S-E fluctuates on level 1 STEM modules and what factors influence S-E.

Methodology



Reference: Bandura, A (1997) 'Self-efficacy: The Exercise of Control'. *W H Freeman/Times Books/ Henry Holt & Co*

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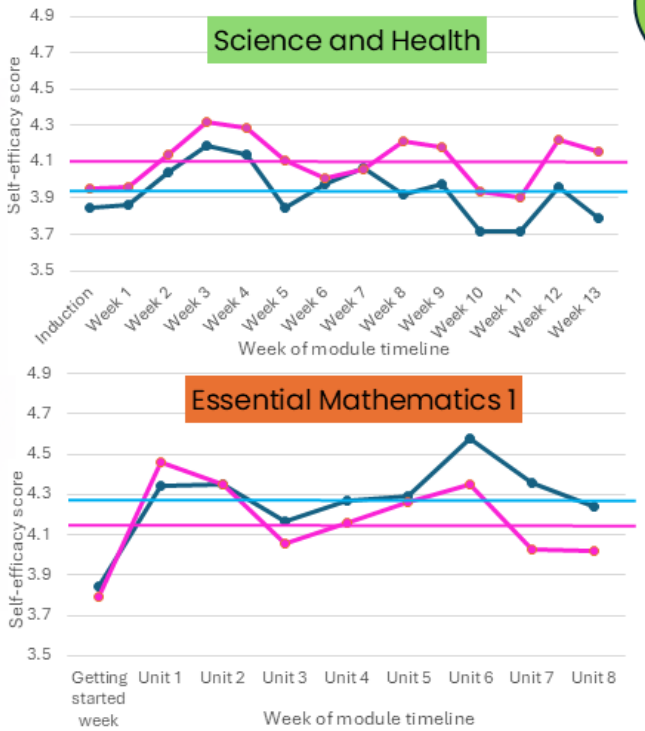
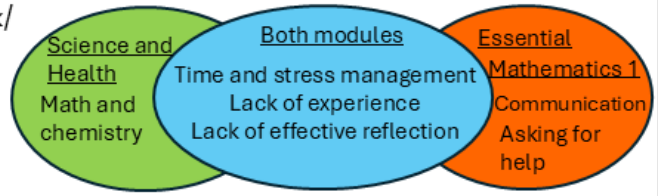
Quantitative results

Baselines calculated from mean of total S-E scores. Mean S-E scores also calculated per module week/ unit. Module presentations included: October 2024 = blue, February 2025 = pink.



Qualitative results

Factors negatively affecting S-E



Results summary

- S-E scores were comparable between October and February presentations within modules
- Scores were not comparable between modules
- There were clear areas of low S-E in the module timeline for both modules
- Individual's S-E was often not accurately calibrated compared to their ability
- Students lacked confidence with reflection, time and stress management
- Maths students lacked S-E regarding asking tutors for help when struggling
- Science students had low S-E for maths and chemistry

Conclusions

- Emoji-scaled questionnaires exploring S-E can provide valuable insights into the student experience
- This can highlight module timeline areas of low S-E which may benefit from targeted S-E boosting interventions

Creating a Sense of Belonging One Postcard at a Time

Elouise Huxor & Theodora Philcox

The Open University

The Why

Retention on U101 had been declining post-pandemic, falling more than 20% below the faculty average, so we were keen to investigate whether increased communication between students and their tutor might develop a greater sense of belonging and thereby improve student outcomes.

The What

As a creative module we wanted to use an innovative approach, so rather than sending emails, communication was effected through lively visual digital postcards. This mirrored the first mini-assignment that requires students to create a postcard to introduce themselves to their tutor.

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The How

We designed a set of postcards, one for each week of the module. They contained bite-sized information highlighting key learning points and reminded students of upcoming tutorials., Tutors emailed them to their students with an encouraging message.

The Value

After a successful pilot run, the project was rolled out to all students on the module on both the J and B presentations. The postcards have had a significant impact; completion rates have risen by as much as 10.6%. Students report that the postcards are helpful and they have also increased attendance at module-wide tutorials.

"In a weird way, the consistent communication takes away part of the loneliness that comes with distance learning." (Student comment)

Poster 8

Do Co-Created Digital Assets Contribute to Students' Sense of Belonging?

Zoë Chapman and Janette Wallace

The Open University

Read our first magazine edition here!

Introduction

Sense of belonging has been linked to improved student retention, attainment and satisfaction (Thomas, 2021; Crawford *et al.*, 2023), including within online learning environments (Peacock & Cowan, 2019).

In this project, we employed OU students as interns via the STEM APP Virtual Internship Programme to co-create series' of digital assets for dissemination to students in the school of Life Health and Chemical Sciences, with the objective of evaluating their impact on students' sense of belonging.

Method

Interns created 12 digital postcards that were released monthly from September 2024 to August 2025, and a student digital magazine released quarterly from January 2025 to February 2026.

Here we present preliminary data from our student survey and web traffic to the host site to explore student engagement with the digital assests and impact of them on student sense of belonging.

Results

Issue	Unique hits	Total hits
1- Winter (January 2025)	1495	1986
2 - Spring (April 2025)	670	837
3- Summer (July 2025)	595	759
4 - Autumn (October 2025)	721	978
5 - Winter (February 2026)	428	581

Table 1. Viewing figures for all editions of student digital magazine

60% of survey respondents were aware that the digital assets were created by OU students.

69% of survey respondents felt that is was important to them that OU students were involved in creating the digital assets.

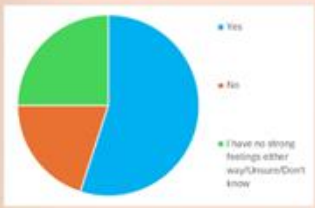

Figure 1. Student survey data showing whether digital assets contribute to sense of belonging.

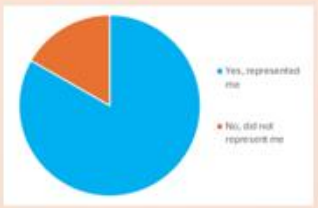

Figure 2. Student survey data showing whether digital assets represented students' interests.

Discussion

Table 1 shows high, but fluctuating viewing figures of the student magazine. This variation can be explained by differing cohort intakes, study breaks, and length of time each edition was available e.g., a drop in summer is expected as the October-start cohort had their summer break. Older magazine editions continue to get web hits as links are shared in newer editions for students to return to these. As there are multi-cohort intakes per year, peaks correspond with overlaps where the maximum number of students are actively studying.

Provisional survey data as shown in figures 1 and 2 suggests that the digital assets represented students' and/or interests, and contributed to their sense of belonging. The fact the digital assets were created by OU students was found to be important.

Further analysis of the survey and web traffic data is required before we reach final conclusions. But these preliminary data suggest that student co-creation is essential in the production of student facing digital assets.

References

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Thomas, L. (2021) #Ibelong: Towards a sense of belonging in an inclusive learning environment. *Widening Participation and Lifelong Learning*, 23 (3), pp. 68-79. Available at: https://doi.org/10.5456/WPLL.23.3.68. (Accessed on: 18 March 2026).

Poster 9

From Pilot to Practice: Facilitating the use of a social virtual reality platform in LHCS

Lucy Anderson, Janette Wallace, Trevor Collins, Sarah Daniell

The Open University

Pilot

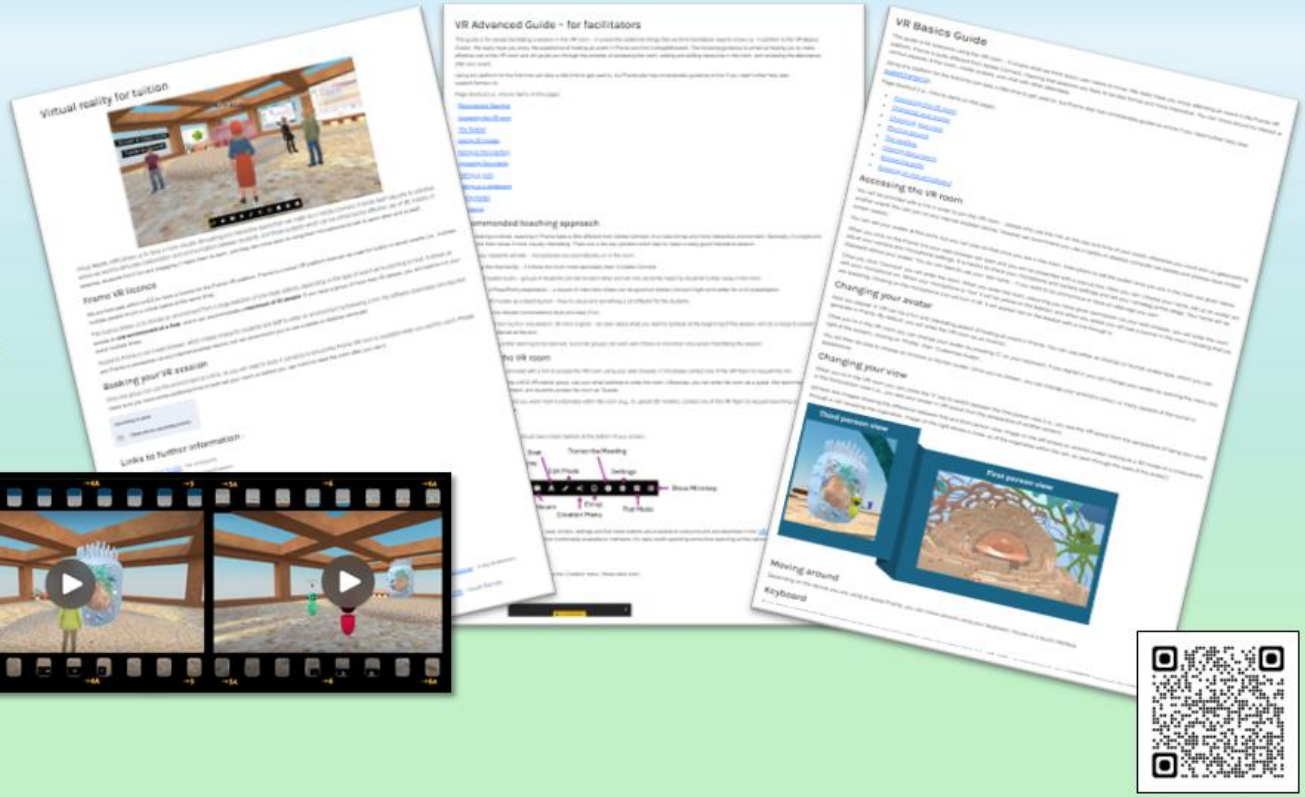
Exploring VR tutorials on S296

Progress

Facilitating and evaluating the use of virtual reality tutorials within the school of Life, Health and Chemical Sciences

Practice

Suite of resources created to support staff and students: VLE site including guidelines and videos



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Poster 10

Bespoke tutor-student allocation for Health Sciences (Q71) students

Katie Acutt, Fiona Moorman & Sarah Daniell

The project **aims** to provide bespoke TSA for Health Sciences students to increase tutor continuity.

The key question is whether having continuity of support across a qualification may be beneficial to students.

At 25J TSA, 95 students were allocated the same tutor who also teaches on multiple Q71 modules (SDK100, SK190, S290, SK297).

Tutor perspective

"It is really helpful to see where the pinch points regarding TMA submission are and to be sympathetic about extensions. I think it has helped me get to know the students better"

"...student support and monitoring both easier and more efficient"

"I'm very happy with how the shared allocation is working, and it aligns well with how I approach tutoring. I haven't really encountered any downsides so far."

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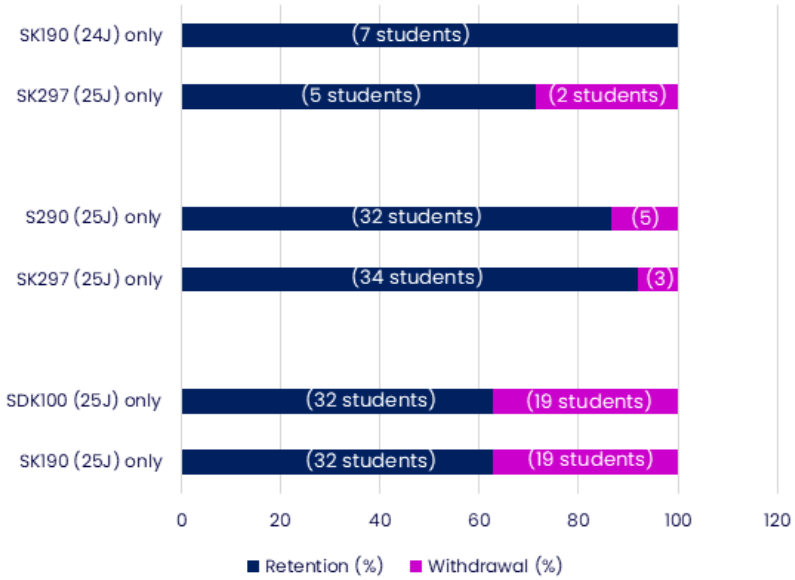
Retention and withdrawal (%) for students participating in the study



Next steps

To **evaluate** whether allocating **students to the same tutor** across multiple modules improves **student and tutor experience** and **retention** outcomes.

Repeat this **bespoke TSA** in **26J**.

Poster 11

Incorporating preferences & inclusivity into curriculum design

Ruth Neal, Ellen Marshall, Emma Steele

The Open University

Project aim

- What is the student perspective of current learning format?
- Are any groups disadvantaged?
- Student preferences regarding future content & format?

Module overviews

M140, M248 and M348 are all textbook based statistics modules with upcoming reviews for assessment or lifecycle.
M140: heavily text based, with point-and-click software.
M248: heavily maths based with point-and-click software.
M348: applied, computer based module using R coding.

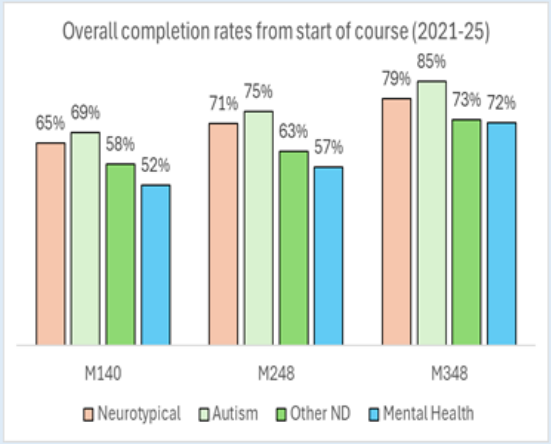
Initial findings

Power BI data 2021-25 for 11000 students.
About 9% registered as neurodiverse (ND), with 50% of those having Autism.

This chart has the % completion out of starting number with Autism & Other ND split.

Autistic students have the highest completion but those with other ND traits & Mental health (MH) condition are much lower.

For M348, the completion rates are better and especially for those with mental health issues.



Next steps

Surveys to include:

- Detailed feedback on modules
- Self-reporting of specific ND/MH
- learning & assessment preferences

- Focus groups for more details
- Collaborate with students on curriculum design

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Poster 12

A Survey of Stage 1 Students on Use of Generative AI and Argumentation

Nitu Bharati, Edsoulla Chung, Paul Piwek

We would like to thank the module chairs of the Stage 1 modules who supported this research: Nigel Gibson (TM111), Ray Corrigan and Tamara Lopez (TM112), Teresa Willis and Keir Irwin-Rogers (DD105), Chris Kubiak and Hilly Davies (K102), Anne-Marie Gallen, Zahra Golrokhi and Sarel Maria (T192) and Jackie Tuck (L101).

Study Overview

Project: Digital Thinking Tools in Action (Open Societal Challenges)

281 Students

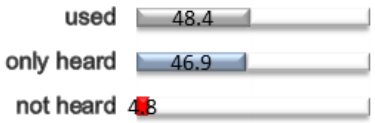
43 Qualifications

Methods

Survey: Jisc,16 MCQs, 97 Likert, 11 open-ended (n=273)

Analysis: Python, JASP, LLaMA 3.2, FDR correction, LFA

GenAI Awareness



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RESEARCH QUESTION 1 What do undergraduates know, believe, and think about making a good argument while using generative AI?

Beliefs About Argumentation & GenAI

Argumentation Value

- **89.8%** agree it's important for **academic development**
- **96.0%** agree it develops **higher-order thinking**

GenAI Perceptions

- **71.6%** see GenAI as helpful to **understand ideas**
- **65.8%** **doubt** GenAI is trustworthy
- **80.4%** worried about **plagiarism**

Confidence Gap

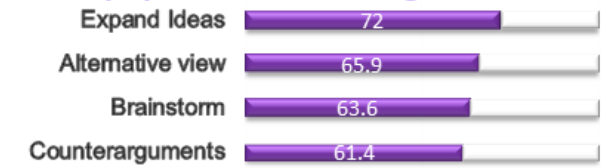
- **90.8%** confident in making logical arguments
- **35.5%** struggle when topics are unfamiliar

Key Insight: Most students view GenAI as useful for support but not replacement of critical thinking.

RESEARCH QUESTION 2 What are the current practices of undergraduates who use generative AI to assist with academic arguments?

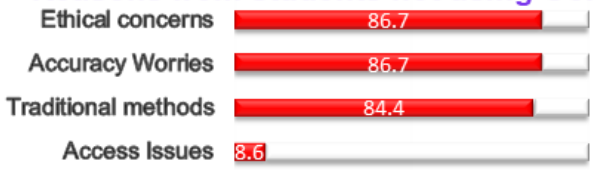
GenAI Usage Practices

Most popular tasks among GenAI users:



61.4% never used to create summaries

Reasons from students not using GenAI:



Key Insight: Non-use is principled, driven mainly by ethical and accuracy concerns, not access barriers.

Poster 13

Investigating Students' Perceptions of University Communications

Vic Pearson, Maria Velasco, Linda Moore and Alison Condliffe

The Open University

Background

Our previous work investigating the reasons for passive withdrawals at Stage 1[1] identified that some students receive significant numbers of diverse email communications from across the university. Similar observations were made[2] even before centralised email interventions were standardised. Here we investigate whether these communications play a role in passive withdrawal behaviour and student engagement on S111 Questions in Science.

Approach

Phase 1 **Phase 2**

Approvals
HREC: 2025-1076-2
SRPP: 2025/3168

Recruit student partner
Students-team liaison
Co-create reflective diary

Recruit students
25J and 26B
n=6

Reflective diaries
Submitted fortnightly
Private forum

Focus groups
End of each presentation
Explore key themes

Preliminary findings

- Tutor emails are highly effective and trusted
- Functional automated emails (e.g. confirmations) are welcomed
- Clear relevance to their studies is preferred
- Potential variability between 25J and 26B student experiences even in early weeks of modules
- Email burden stems from duplication, poor signalling, and lack of control (opt in/opt out), not perceived high volumes
- Reminder or prompt emails are considered intrusive/coercive
- Corporate language, jargon, or overly formal formatting puts some students off.

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References

[1] Pearson, Velasco and Moore (2025). In: The 13th eSTEeM Annual Conference Proceedings: Sharing Best Practice - Implementing What Works (Pawley and Chang eds.). DOI: https://doi.org/10.21954/ou.ro.00102270 [2] Robson and Cook (2015) The Open University Scholarship Exchange. Available at: https://hdl.handle.net/10779/ou.se.24351895.v1

Poster 14

Exploring How Structured Engagement Opportunities Could Help Students Address Eco-anxiety Through Supporting Wellbeing and Fostering Community Building.

Harriet Marshall & Yvonne Chakraborty

Project outline: Responding to evidence of eco-anxiety and reduced wellbeing among students, especially environment students at The Open University (Davies et al 2022., and Patent et al., 2024), this pilot will deliver and evaluate two online session types for EEES students. Sessions are designed to foster emotional support for eco-anxiety, peer connection and wellbeing. Both aim to strengthen community and belonging in a distance-learning context, where connection often benefits from active facilitation.

Session 1, Climate Café: facilitated, informal space for discussing feelings, emotions, and thoughts on the climate and ecological crises without being directed to action or problem-solving. Climate Café sessions aim to provide a unique space for students that is distinct from academic and analytical modes of engagement required for study.

Session 2, Action Session: co-student led and facilitated sessions focused on storytelling about environmental action, with substantial time for small-group and whole-group discussion. The sessions aim to respond to eco-anxiety by promoting wellbeing through connection, agency, and positive environmental engagement, while also building confidence and communication skills.

Proposed session interactions mapped onto three elements of living with the Climate and Ecological Crisis. Adapted from Pihkala (2022).

Aims

Design and assess both session approaches for their capacity to help students respond to eco-anxiety, support wellbeing and foster a sense of community and belonging.

Outcomes

Generate qualitative and quantitative data around participation and effectiveness in fostering community and wellbeing and addressing eco-anxiety. Generate evidence-based recommendations for establishment of a larger scale study during 2027J .

Status

Pre-ethics approval. Co-leads are completing Climate Café facilitation training with the Climate Psychology Alliance. Scoping literature search completed. Research design and stakeholder engagement in process.

Term 3 25J	Term 1 26J	Term 2 26J	Term 3 26J
Research design & permissions	Session 1 rollout	Session 2 rollout	Analysis & report

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Evaluating the Programming for Physical Sciences website and forums on SM123 Physics and space

The Open University

Andy Diament, Gemma Warriner & Stella Bradbury

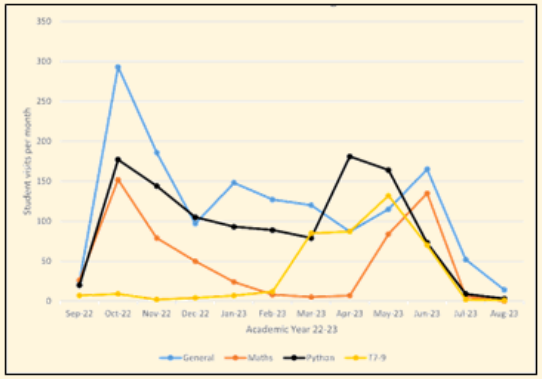
What did we know?
Students find programming hard.
How do we know?
We asked them in a previous study.
What did we do about it?
We added content to support website Programming for Physical Sciences website .

How are we answering these questions?

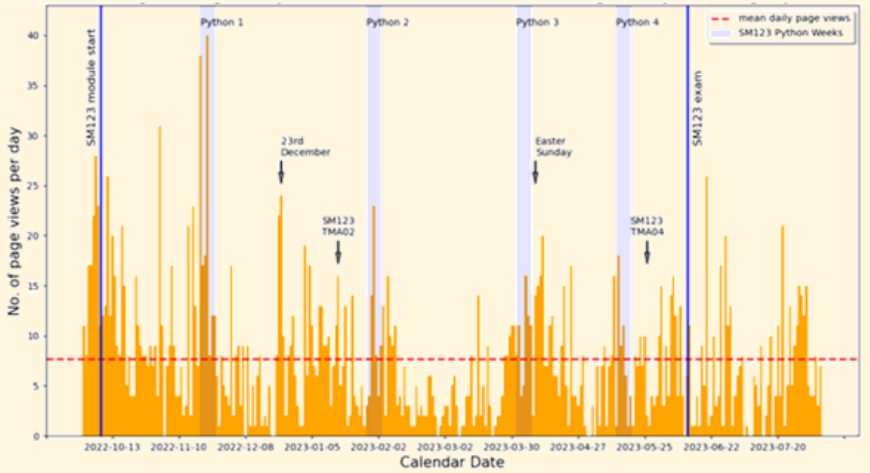
- Analysing access logs
- Survey of website users
- Qualitative analysis of forums from 2 presentations; private forum on 2nd presentation only

What do we want to know?

- How and when are they using the website?
- What do they think of the website?
- How are they using the Python programming forum in SM123?
- Are they using a new private forum differently? An intervention



SM123 forum access – 22J presentation



Programming for Physical Sciences access - 22J presentation

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Poster 16

Fixing Broken Content Access: A Design-Led Solution

One-third of students couldn't access materials — this wasn't a user error; it was a design problem

Stuart Auton, TM252 Web technologies

The Open University

- ~33% enrolled incorrectly
- Links in VLE appeared 'broken' for these students
- High support requests for ALs and Module Team
- Complaints from students + ALs

- Illustrated step-by-step guide
- Checker tool for ALs combined data from:
  1) NTS (Named Teaching Support)
  2) TutorHome
  3) OpenEDG

- Fewer student support queries
- ALs able to proactively support students to ensure correct enrolment
- Improved student experience
- Improved student retention in Block 1

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Poster 17

Researching student barriers and enablers: a reflection on the role of research ethics

Dr. Chris Corcoran

The Open University

Researching Barriers and Enablers in Education:

What are the Barriers and enablers to higher education experienced by disabled students from minority cultural backgrounds
How does Network Mapping support the transition to university of deprived students to Engineering and Design & Innovation
What are the Enablers and Barriers for Students with Mental Health Difficulties: What helps and what stops successful study.

Role of Research Ethics

- Taken for granted
- Research processes need to be clear and transparent
- Commendable

But strict adherence to research ethics can create barriers

- Prevents innovation
- Creates delays
- Creates administrative research barriers

Reflection

Research ethics is there for a reason as it underpins good research and promotes trust and confidence in the research process.

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