



## **Advance HE Teaching and Learning Conference 2019**

**Northumbria University, Newcastle**

**Day three, 4 July 2019**

**Social Sciences**

**STEM**

## Contents

<b>Keynote</b> .....	7
<b>Social Science Strand</b> .....	7
<b>Parallel Session 1 Social Sciences, 11:20 – 12:20</b> .....	7
SOC1.1: Innovative teaching and support mechanisms on entry-level Social Science modules at The Open University.....	7
SOC1.2: Challenges and opportunities for embedding employability within the undergraduate curriculum.....	7
SOC1.3: Building a chatbot to support students completing assessments.....	7
SOC1.4: "Diversity is being at the party. Inclusiveness is being invited to dance". TBL approach to teaching Economics.....	8
SOC1.5: Transition and retention: Challenges faced and challenges overcome.....	8
<b>Parallel Session 2 Social Sciences, 13:20 – 14:20</b> .....	8
SOC2.1: Stepping out of the ivory tower into the community: Innovation in teaching and learning social work.....	8
SOC2.2: Learning to teach: Making teacher training accessible and fun for postgraduate tutors.....	9
SOC2.3: Developing threshold capabilities to enhance student critical thinking and problem solving skills for employability.....	9
SOC2.4: Masks and role play for helping students negotiate personality differences in group work.....	9
SOC2.5: Creative role play supporting practitioner learning.....	9
<b>Parallel Session 3 Social Sciences, 14:30 – 15:30</b> .....	<b>9</b>
SOC3.1: Active learning and flipping the classroom in Social Sciences.....	10
SOC3.2: Understanding and reducing student stress within assessment practice.....	10
SOC3.3a: Delivering the Legal Practice course through blended learning: Challenges and good practice.....	10
SOC3.3b: Blended learning lessons across modules and universities.....	10
SOC3.3c: Technology-enhanced active learning (TEAL): A departure from 'traditional' lectures.....	11
SOC3.4a: Capturing the employability in volunteering: Enhancing learning and the CV ..	11
SOC3.4b: Unpicking the verbal communication and confidence gap: Skills desired by employers and students alike, yet mainly unaddressed in HE in the UK.....	11
SOC3.4c: Threshold concepts in entrepreneurship.....	12
SOC3.5a: Playing the HE game: Transition from school to university.....	12
SOC3.5b: TBC.....	12
SOC3.5c: Are you ready to teach?.....	12

**Poster Presentations Social Sciences, 15:30**

**16:00.....12**

SOCPOST: Exploring visitors' perception in gallery with special education teachers and gallery educators in Malaysia .....	12
SOCPOST: Conceptualising models of collaborative and co-operative group work: A case study approach.....	13
SOCPOST: Mentoring culture in small specialist universities .....	13
SOCPOST: Understanding barriers to participation in online tuition .....	13
SOCPOST: "Out with the old": Using new simulated reality approaches to teach students about age-related stereotypes .....	14
SOCPOST: A case study of co-creation in assessment design on an undergraduate Education Studies programme: Developing relevance, engagement and success.....	14
SOCPOST: Programme choices by undergraduates at two different universities .....	14
SOCPOST: Research-based learning and assessment.....	14
SOCPOST: A qualitative action study to explore Saudi pre-service teachers' experiences and their supervisors' perspectives of using electronic reflective journals during their field experience.....	15
SOCPOST: Take a picture of religion: Engaging students at a distance through digital photography .....	15
SOCPOST: Uncovering expectations and perceptions of the final year undergraduate dissertation.....	15
SOCPOST: Aligning Blooms' Taxonomy with scaffolding, contextual and collaborative teaching methods to improve learner outcomes .....	15
SOCPOST: The importance of peer-to-peer learning in academic socialisation .....	16

**Parallel Session 4 Social Sciences, 16:00 – 17:00.....16**

SOC4.1a: OpenUp UEA: Supporting student wellbeing 16

SOC4.1b: Getting a better understanding of our BAME students: We can get them in, but how do we encourage them to stay, progress and attain? .....	16
SOC4.1c: Dyslexia diagnosis: Inconsistencies in assessment practices and the need for a holistic approach to support.....	16
SOC4.2a: Verbal peer-assessment and feedback as an economical tool for understanding assessment criteria.....	17
SOC4.2b: Authentic assessments in higher education .....	17
SOC4.2c: Exploring students' perceptions of assessment, feedback and moderation processes in higher education: A key to enhancing evaluation practices .....	17
SOC4.3a: Moodle: Can it engage students to improve their learning? Or should we forget it! .....	18
SOC4.3b: Central Saint Martin's Birkbeck MBA: A hybrid, blended disruptive MBA.....	18
SOC4.3c: Interdisciplinary learning: A whole new ball game .....	18

SOC4.4a: Sell yourself! Video CVs and e-portfolios for employability .....	18
SOC4.4b: Embedding employability skills into a new module by diversifying assessment in collaboration with students .....	19
SOC4.4c: Embedding employability in course design: An international experience .....	19
SOC4.5a: 'Words divide, pictures unite': A short film about visual pedagogy and assessment .....	19
SOC4.5b: Learn before the lecture: An inquiry into a flipped classroom design in undergraduate Economic teaching .....	19
SOC4.5c: Enhancing meaningful learning of undergraduate Business students by introducing feedback scaffolding.....	20
<b>STEM Strand.....</b>	<b>21</b>
<b>Parallel Session 1 STEM, 11:20 – 12:20.....</b>	<b>21</b>
ST1.1: It does exactly what it says on the box: Achieves higher levels of engagement and deeper learning at any level on any topic.....	21
ST1.2: This house believes that students are not just faces in the crowd: Opportunities, benefits and challenges involved in developing learning and teaching partnerships in large classes .....	21
ST1.3: Novel training for undergraduates to respond to chemical incidents or attacks.....	21
ST1.4: An introduction to the light board pedagogy .....	22
ST1.5: TBC .....	22
<b>Parallel Session 2 STE M 13:20 – 14:20.....</b>	<b><u>22</u></b>
ST2.1a: Engineering telecollaboration for Language learning .....	22
ST2.1b: Sta(r)tistics: A Massive Open Online Course (MOOC) to teach Statistics in Biomedical Sciences .....	22
ST2.1c: Reactions and resistance to a university interdisciplinary learning initiative in a STEM faculty .....	22
ST2.2a: Progress on national pooling infrastructure for remote laboratories.....	23
ST2.2b: An investigation into the impact of individual differences on immersive learning environment preparedness training .....	23
ST2.2c: Experience with designing for failure in STEM.....	23
ST2.3a: The challenges of teaching a Computer Science Capstone team project to a large cohort of undergraduate students .....	24
ST2.3b: Innovative practices that aid employability: Technical Writing Pathway in the School of Electronic Engineering and Computer Science, Queen Mary University of London .....	24
ST2.3c: Using hackathons to improve the teaching and learning of entrepreneurial skills	24
ST2.4a: Gendered transition from school to university for Life Science students: A case study exploring the role of self-efficacy .....	25
ST2.4b: Inclusivity by student choice in research-led modules .....	25

ST2.4c: Unseen disabilities in undergraduates: An invisible opportunity for collaborative group learning? .....	25
ST2.5a: Student “maker” clubs: (Re)engaging students through interdisciplinary hands-on workshops .....	25
ST2.5b: A liberal undergraduate civil engineer: Read all about it! .....	26
ST2.5c: Recognising the impact and achievements of graduate teacher assistants in STEM subjects, through tailored training and peer-mentor support pathways mapped against the UKPSF .....	26
<b>Parallel Session 3 STEM, 14:20 – 15:30</b> .....	<b><u>25</u></b>
ST3.1a: A new academic-branded blog to enhance the curriculum, innovate pedagogy and engage the society .....	26
ST3.1b: Managing student expectations using the ‘ideal’ university student survey: Induction with Design Engineering undergraduates .....	26
ST3.1c: The realities of engaging Foundation Year STEM students with Mathematics using TBL.....	27
ST3.2a: Facilitating student research in a distance learning setting.....	27
ST3.2b: Helping students help themselves: The application of low-stake, instant feedback, driving small incremental improvements to immerse students in course content .....	27
ST3.3a: Promoting learner autonomy and engagement through peer-assisted study sessions for international students.....	28
ST3.3b: Pride and Prejudice and technology (that enhances learning) .....	28
ST3.3c: Adopting mobile phones into higher education learning environments: Practicalities and implications for pedagogic practice .....	28
<b>Poster Presentations STEM, 15:30-16:00</b> .....	<b>28</b>
STEMPOST: Teaching and learning public health: A #DMUglobal perspective .....	28
STEMPOST: Investigating learner perceptions and outcomes of the flipped classroom in Foundation Chemistry classes.....	29
STEMPOST: Supporting Foundation Science students in constructing arguments about socio-scientific issues: Designing an educational intervention .....	29
STEMPOST: The use of serious games in Chemistry teaching at Levels 4 and 5 .....	29
STEMPOST: Effective assessment and feedback in a Software Engineering group project .....	29
STEMPOST: Using e-learning to enhance student engagement with laboratory-based learning .....	30
STEMPOST: Developing the employability skills and professional competencies of students on a Biomedical Sciences course: Piloting a skills-mapping approach across a three-year undergraduate programme.....	30
STEMPOST: Pokemon Go as a cognitive and societal developmental tool .....	30
STEMPOST: Supporting the transition to academic writing in higher education .....	30
STEMPOST: Enhancing student interpretation of feedback using videos .....	31

STEMPOST: Interactive learning in higher education .....	31
STEMPOST: A comparative study of take-home case study versus closed-book exam for Mathematics, in a cohort of Foundation Year Engineering students .....	31
STEMPOST: An innovative web-based tool to solve group marking issues .....	31
STEMPOST: Maximising your environment by the application of Blended Classroom Response System .....	32
Parallel Session 3 STEM, 16:00 – 17:00.....	32
ST4.1a: The good, the bad and the ugly of team-based learning in a blended learning environment: The student view .....	32
ST4.1b: The implementation of a novel collaborative learning module to introduce Pathology to first year Biomedical Science undergraduates .....	32
ST4.1c: Escape Room Revision .....	33
ST4.2a: Forensic casework examination: Taking the fear out of embedding employability into a module.....	33
ST4.2b: Making the links between the dissertation process and employability: Harnessing the voice of alumni.....	33
ST4.2c: Diversifying assessments for MSc-level Molecular Biology students to promote employability.....	33
ST4.3a: Using Snapchat as a tutorial tool in higher education .....	34
ST4.3b: Supporting the international student transition: The English-Mandarin video glossary for Environmental Science students .....	34
ST4.3c: Adaptive, online bridging courses for personalised learning .....	34
ST4.4a: Are we using technology for its novelty value or because it is useful? .....	35
ST4.4b: A new academic-branded blog to enhance the curriculum, innovate pedagogy and engage the society .....	35
ST4.4c: Peer instruction: Why, what and how?.....	35
ST4.5a: Improving student engagement with marking criteria and feedback (in large classes).....	35
ST4.5b: Using problem-based learning for a Pharmaceutical Chemistry practical course: The power of the virtual client.....	36
ST4.5c: Practice-based Engineering assessments that promote originality, problem solving and timely delivery of feedback.....	36

## Keynote

Keynote Dr Debbie McVitty, Editor, Wonkhe  
Keynote (60 minutes) Room 001, 10:00-11:00  
TBC

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## Social Science Strand

### Parallel Session 1 Social Sciences, 11:20 – 12:20

#### **SOC1.1: Innovative teaching and support mechanisms on entry-level Social Science modules at The Open University**

Dr Georgina Blakeley and Mr Matt Staples, The Open University  
Workshop (60 minutes), Room 213, 11:20-12:20

The OU's entry-level interdisciplinary Social Science module attracts over 6,000 students each year. Approximately 40% of students starting this module have low/no prior educational qualifications and/or low socio-economic status and 20% declare a disability. As a result of this demographic, innovative teaching materials and support mechanisms are essential to student success. This session covers innovations in teaching such as online skills activities and the use of animations in teaching students to think like social scientists. Innovations in student support will also be covered. Participants will experience what it feels like to be a student starting at the OU and will be able to participate in activities designed for entry-level students.

#### **SOC1.2: Challenges and opportunities for embedding employability within the undergraduate curriculum**

Dr Mark Field and Professor Karen Heard-Lauréote, University of Portsmouth  
Workshop (60 minutes), Room 214, 11:20-12:20

In this session, the presenters will facilitate a discussion on the opportunities and challenges of embedding employability within the undergraduate curriculum - a current policy priority and a significant challenge for the HE sector. The presenters recently introduced a level 5 UG unit "Politics and Policy in Action" to the Politics and International Relations (PIR) curriculum. This thirteen-week unit is designed as a continuously assessed simulation exercise which allows students to develop and then demonstrate key employability skills.

#### **SOC1.3: Building a chatbot to support students completing assessments**

Dr Paul Dickerson, University of Roehampton  
Workshop (60 minutes), Room 221, 11:20-12:20

Although artificial intelligence technology has been around for approximately 50 years its use in the form of chatbots within the higher education context is very varied. This session aims to briefly outline some of the potential benefits (and shortcomings) of using chatbots to support students within HE. The session will also seek to empower participants to actually build their own basic chatbot using free, readily available technology that does not require any coding knowledge. Finally, the session will provide the opportunity for participants to

form an online group where experiences and support related to using chatbots in HE can be shared.

#### **SOC1.4: "Diversity is being at the party. Inclusiveness is being invited to dance". TBL approach to teaching Economics**

Dr Gabriella Cagliesi and Miss Mahkameh Ghanei, University of Greenwich

Interactive breakout session (60 minutes), Room 222, 11:20-12:20

In this interactive session we present the results of the application of the team-based learning (TBL) approach to a final year undergraduate core Economics course, and we demonstrate the main features of this innovative pedagogy by engaging with the participants. The TBL approach is a well-structured teaching and group learning pedagogical strategy, based on the theory of constructivism, designed to engage students through individual testing and small group collaboration, where tutors are facilitators who provide immediate process driven feedforward responses. Our results show that TBL is a very rewarding and enjoyable experience which not only engaged students but drew us closer to their way of learning.

#### **SOC1.5: Transition and retention: Challenges faced and challenges overcome**

Ms Zoe Ollerenshaw and Mrs Joan Upson, University of Sheffield

Workshop (60 minutes), Room 223 A, 11:20-12:20

This interactive workshop session aims to consider various challenges faced and overcome in transition and retention by students studying at a Russell Group university from a widening participation background. Its objective is to cover issues identified by students participating in the University of Sheffield's School of Law Success in Transition, Employment and Progression programme (STEPS). In a bid to share and learn from best practice it will then consider challenges faced and overcome by workshop participants in respect of transition and progression matters.

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### **Parallel Session 2 Social Sciences, 13:20 – 14:20**

#### **SOC2.1: Stepping out of the ivory tower into the community: Innovation in teaching and learning social work**

Dr Kate Jonathan, University of the Sunshine Coast

Workshop (60 minutes), Room 213, 13:20-14:20

The image of universities as ivory towers is longstanding. It is where ideas and knowledge are generated, nurtured and passed on; but the community is where the action is. Both entities have been very separate and different, even though universities exist in communities; as part of, yet distinct in their values, conduct and actions. Recently, however, the need has arisen for the university to be embedded in, participate and relate, as in collaborating with the community. This workshop aims to explore (through storytelling, games, discussion and quiz) with the conference participants the journey of ground level involvement and engagement with a regional community to improve learning and opportunities for students, graduates, the university and the community at large.

## **SOC2.2: Learning to teach: Making teacher training accessible and fun for postgraduate tutors**

Dr Michael Willett and Dr Emmajane Milton, Cardiff University

Interactive breakout session (60 minutes), Room 214, 13:20-14:20

In this workshop, we discuss Cardiff University's recently-expanded 'Learning to Teach' programme for postgraduate tutors, which is now delivered across the College of Arts, Humanities and Social Sciences. The workshop will begin with an overview of the programme's foci and nature of delivery, and the challenges of adapting its content for a wider, more diverse audience who span a wide range of disciplines. We will then invite participants to join in with a range of interactive learning activities from the course. These include supporting the development of effective questioning skills and illustrating techniques for providing quality feedback on assessment.

## **SOC2.3: Developing threshold capabilities to enhance student critical thinking and problem solving skills for employability**

Dr Peter Lamb, University of Nottingham, Ningbo China Campus

Interactive breakout session (60 minutes), Room 221, 13:20-14:20

There is an abundance of critique which questions the utility and relevance of business school teaching, indicating that it often fails to prepare students for their future employment practice. Drawing on threshold capabilities literature, this workshop will demonstrate how the principles of phronesis and techne can be utilised within the context of international management to develop the critical thinking and problem solving skills of students, thus enhancing their employability. Participants will gain insights into how the principles of phronesis and techne can be embedded into pedagogy by deconstructing and reverse engineering examples of knowledge transfer failure.

## **SOC2.4: Masks and role play for helping students negotiate personality differences in group work**

Mr Andy Peisley, Falmouth University

Workshop (60 minutes), Room 222, 13:20-14:20

Do your students have problems working in groups? Do you teach students about personality differences? Looking for ways of engaging your students more fully and physically? This workshop might help. The liberating power of masks is used in this workshop, to help participants apply psychological knowledge about personality to generate, explore, evaluate and practice different strategies for negotiating personality differences when working with others in groups. This should help you generate ideas for how you could adapt this approach in your own teaching context, to help your students work more effectively in groups.

## **SOC2.5: Creative role play supporting practitioner learning**

Mr David Soehren and Mrs Maureen Royce, Liverpool John Moores University

Workshop (60 minutes), Room 223 A, 13:20-14:20

During this workshop, participants will have an opportunity to explore how the workshop facilitators are continuing to develop a co-creation teaching framework which encourages student engagement and fosters their practitioner skills to design and facilitate an Assessment Centre. Participants on this workshop will be exposed to both the teaching framework methodology and the student experience by developing a small part of an

Assessment Centre activity. Participants will then be encouraged to examine how they can translate this to their own curriculum design.

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## **Parallel Session 3 Social Sciences, 14:30 – 15:30**

### **SOC3.1: Active learning and flipping the classroom in Social Sciences**

Dr Rachel Howell, The University of Edinburgh

Interactive breakout session (60 minutes), Room 213, 14:30-15:30

The aim of this session is to share experiences of 'flipping the classroom' in Social Science subjects: promoting pre-class preparation by students and engaging them in active learning during class time. It offers the opportunity to experience and discuss active learning exercises, and hear about student responses to the flipped classroom. We read a lot about flipping the classroom in STEM subjects but there is little literature discussing it in relation to Social Science subjects. I hope that sharing my experience of employing flipped classroom and active learning techniques might inspire others to experiment with their own Social Science classes.

### **SOC3.2: Understanding and reducing student stress within assessment practice**

Dr Sue Wilbraham and Mrs Joanne Scott, University of Cumbria

Interactive breakout session (60 minutes), Room 214, 14:30-15:30

This session will ask delegates to reflect on their assessment practice and consider where students might experience stress and anxiety. Although some level of stress might be helpful in challenging students to develop and improve, we will ask which elements of assessment could be adapted or improved to remove unnecessary stressors or reduce the extent of student anxiety. Together we will explore strategies for improving student experience of assessment, and invite you to share your experiences and best practice within learning and teaching.

### **SOC3.3a: Delivering the Legal Practice course through blended learning: Challenges and good practice**

Ms Anna Garland, Mr Paul Allen and Mrs Sallyann Mellor, Staffordshire University

Oral presentation (20 minutes), Room 221, 14:30-15:30

This session will draw on the experience of delivering a Legal Practice Course through an innovative model of blended learning. The presentation will reflect on the development of good practice in vocational legal education, to meet the needs of a diverse cohort of students for whom a campus-based mode of delivery is not practicable. The particular challenge of delivery to students who are based in the Caribbean throughout their studies will be addressed, and how blended learning techniques can build a community of teaching and learning which reaches across more than 4000 miles.

### **SOC3.3b: Blended learning lessons across modules and universities**

Professor Steve Cook, Swansea University, Dr Duncan Watson and Dr Peter Dawson, University of East Anglia and Dr Robert Webb, University of Nottingham

Oral presentation (20 minutes), Room 221, 14:30-15:30

A dynamic literature exists which demonstrates the significant value of adopting blended learning techniques. Despite this, our paper questions whether there is a risk of creating a false 'flipped classroom' ideal which encourages too much homogeneity. The investigation

explores methods of blended learning across different modules in different institutions. Quantitative techniques are used which allow estimation of the impact of blended learning on student engagement and learning outcomes. The results indicate significant benefits from the use of a broad and flexible methodology, enabling the integration of the development of analytical skills with problem-based learning.

### **SOC3.3c: Technology-enhanced active learning (TEAL): A departure from 'traditional' lectures**

Ms Jemma Tyson and Ms Claudia Cox, University of Portsmouth

Oral presentation (20 minutes), Room 221, 14:30-15:30

This session will outline the development of the TEAL project undertaken within the Institute of Criminal Justice Studies at the University of Portsmouth. The project focused on two large L4 modules involving over 400 students, combining the flipped classroom approach with the development of interactive digital resources delivered through small seminar classes; resulting in the removal of lectures from the students' programme of learning. The session will explore the project in more detail; including staff and student reflections on their experiences and the barriers encountered when transforming the curriculum on a large scale. The future direction of the project and how it can facilitate a community approach to learning in HE across both campus and online students will be explored.

### **SOC3.4a: Capturing the employability in volunteering: Enhancing learning and the CV**

Dr Patricia Mahon-Daly and Dr Anne Chappell, Buckinghamshire New University

Oral presentation (20 minutes), Room 222, 14:30-15:30

This presentation details an innovative pedagogy in the Social Science curriculum. It reports on the experiences of both students and lecturers involved in the creation and delivery of a work-related module which requires students to spend time in a volunteering setting. The presentation will discuss the rationale for the module, the experience of volunteering and hopes for reflective and directive feedback from the audience. The findings from the module are that students from widening participation backgrounds don't appreciate their employment capital. Using theory to reflect on a volunteering experience can enable students to enhance their digital and in vivo employability.

### **SOC3.4b: Unpicking the verbal communication and confidence gap: Skills desired by employers and students alike, yet mainly unaddressed in HE in the UK**

Ms Isabel Fischer, University of Sussex

Oral presentation (20 minutes), Room 222, 14:30-15:30

Poor verbal communication skills frequently lead to a lack of self-confidence which in turn leads to students not joining networking events with potential employers. Yet teaching transferable skills, such as verbal communication, seems to be still neglected in the HE curriculum in the UK. In this session, delegates will receive an overview of recent research across eight UK universities on factors students and employers consider important for academic achievement and mid-term career prospects. Delegates will also be able to discuss ideas of how to close the verbal communication and self-confidence skills gap and receive suggestions expressed by undergraduate students and faculty.

### **SOC3.4c: Threshold concepts in entrepreneurship**

Ms Lucy Hatt, University of Northumbria

Oral presentation (20 minutes), Room 222, 14:30-15:30

Entrepreneurship is an important factor in economic growth and job creation, and entrepreneurship education has grown rapidly. However, there is no consensus on the theoretical grounding or conceptual framework for entrepreneurship education. The purpose of this presentation is to present research into the concepts critical to entrepreneurship, in order to inform the design of immersive teaching and learning practice in this area. Using a Delphi-style technique, a list of five candidate threshold concepts was developed. Identifying threshold concepts will potentially open up new and more effective approaches to teaching and learning entrepreneurship, as well as offering a theoretical grounding for existing effective practice.

### **SOC3.5a: Playing the HE game: Transition from school to university**

Mr James Armes, University of East Anglia

Oral presentation (20 minutes), Room 223 A, 14:30-15:30

The first year at university is vitally important in developing learner behaviour. Norwich Business School at UEA approaches its induction in an innovative way. Rather than being simply information sharing sessions, we introduced a piece of work for students to complete that demonstrates the required learning outcomes in an active learning environment. The aim of the session is to introduce how the induction activities support students in completing this formative work and how the activity has developed over the last three years to the point that the university is considering whether to adopt the process for the institution as a whole.

### **SOC3.5b: TBC**

Oral presentation (20 minutes), Room 223 A, 14:30-15:30

TBC

### **SOC3.5c: Are you ready to teach?**

Mr Leo Africano and Ms Shona Dunn, Newcastle College University Centre

Oral presentation (20 minutes), Room 223 A, 14:30-15:30

Satisfied students know what they are embarking on from the beginning of their programme. Initial advice and guidance (IAG) plays a key role in student retention. This session aims to share our experiences as teacher educators and the reflections of our student teachers on the impact of our revised IAG and interview process. This new process enabled applicants to evidence and staff to assess preparedness, skills, knowledge and attitudes required whilst on programme and to succeed professionally as teachers. We hope other HE professionals can learn from our experiences.

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## **Poster Presentations Social Sciences, 15:30-16:00**

### **SOCPOST: Exploring visitors' perception in gallery with special education teachers and gallery educators in Malaysia**

Mr Bahrom Mohd Isa, Liverpool John Moores University

Poster presentation, Ground Floor Lobby, 15:30-16:00

Students with Special Educational Needs (SEN) in Malaysia face issues of exclusion and disadvantage in relation to the educational experiences they may have. This has been recognised by the Malaysian government, and, as such, policy has been developed to

attempt to address this. The Malaysian Ministry of Education is eager to integrate creative learning into the curriculum across all age groups within the Malaysian education system and indeed is keen to ensure that SEN students have an equitable experience. The aim of the project behind this poster, therefore, is to attempt to increase the opportunities in this area for students with SEN, by bringing gallery educators together with SEN teachers to develop a tailored gallery education experience for such students.

### **SOCPOST: Conceptualising models of collaborative and co-operative group work: A case study approach**

Dr Cheryl Gordon, University of Central Lancashire

Poster presentation, Ground Floor Lobby, 15:30-16:00

In recent years, NSS qualitative feedback has indicated rising discontent among students around the nature, structure and equity of group work. This, combined with the changing nature of work skills indicates the need to consider alternative approaches to assessments involving working with others. This poster aims to offer alternative ideas to traditional group work through conceptualising collaborative and cooperative models which illustrate the balance between individual and group learning and contribution. The poster will illustrate examples and feedback from action research over the past three years undertaken with a number of groups of undergraduate Business and Management students.

### **SOCPOST: Mentoring culture in small specialist universities**

Dr Dimitrios Paparas, Harper Adams University

Poster presentation, Ground Floor Lobby, 15:30-16:00

Mentoring and coaching offer meaningful and significant ways in which academic staff can encourage and support each other in their professional development and ultimately go on to enhance the student experience. Mentoring can take on formal or informal relationships. Traditionally, at Harper Adams University, mentoring has been considered more of an informal relationship between senior individuals (mentor) who are paired with younger individuals (protégé). Formal mentoring is often initiated by an organisation to assist with one or more of the following functions: new employee socialisation/enculturation, complement established formal learning processes, improve performance, and/or realise potential (Gibb, 1999).

### **SOCPOST: Understanding barriers to participation in online tuition**

Dr Donna Smith and Dr Katy Smith, The Open University

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster presents findings from a project looking at student participation in online learning events across multiple modules. The poster will present data relating to students' attendance and participation in synchronous and asynchronous sessions. Demographic factors will be examined including BAME, WP and disability. It will present the extent to which events are accessed by students, the comparison between the demographics of the attendees and the overall module cohort. The poster will also start to consider whether there are barriers to participation, and how these might be addressed for the particular demographic, and the mode of tuition delivery.

## **SOCPOST: “Out with the old”: Using new simulated reality approaches to teach students about age-related stereotypes**

Dr Joanne Hudson, Swansea University

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster will present a study that assessed the use of simulated reality experiences in teaching students about ageing, and, the psychological and physical barriers to being physically active that older adults face. The study had two objectives: to evaluate students' experiences of simulated reality in learning and teaching sessions about physical and psychological barriers to older adults' physical activity; and examine the effect of simulated reality immersive experiences on students' perceptions of ageing, stereotypes of ageing and empathy for older people. The poster will outline teaching methods used and outcomes of the study for students.

## **SOCPOST: A case study of co-creation in assessment design on an undergraduate Education Studies programme: Developing relevance, engagement and success**

Dr Mark Pulsford, University of Warwick

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster will presents a case study of work to develop a new assessment task for a second year undergraduate module on a large Education Studies programme. It outlines the topic and nature of the novel assessment piece (a practitioner-focused information leaflet), considering how these articulated with both students' own experiences and their potential future professional practice. The poster will then summarise the approach taken to student-staff co-creation of the marking criteria for the assignment. It aims to provide a rationale for, and set of steps that could be taken, in developing relevant and engaging assessment tasks that can improve student attainment.

## **SOCPOST: Programme choices by undergraduates at two different universities**

Dr Martin Jones, University of Dundee

Poster presentation, Ground Floor Lobby, 15:30-16:00

Curriculum innovation requires knowledge of the target audience for a curriculum and inclusivity requires knowledge of the type of student who would choose it. There has been little systematic study of this issue. The work to be presented is a statistical analysis of the programme choices made by undergraduate students entering business schools at two different universities: Dundee and Greenwich. It will examine how such choices are influenced by social class, gender, ethnic background, country of origin, academic ability and other factors. The results help us understand students' motives when choosing programmes in terms of their social background.

## **SOCPOST: Research-based learning and assessment**

Dr Padmi Nagirikandalage and Mr Tao Chang, University of Chester

Poster presentation, Ground Floor Lobby, 15:30-16:00

Research-based learning (RBL) is a journey, taking students from their conventional school teacher-led experiences through research-led teaching to RBL in the higher education institute. Consequently, a transfer from being taught to being independent, self-resilient but yet supported and supervised as well. RBL is optimal only when students could learn as researchers in exploratory, analytical and problem-solving activities where it assists more

engagement from students in the classroom. Accordingly, research becomes an authentic but complex task and will accommodate transformational learning.

### **SOCPOST: A qualitative action study to explore Saudi pre-service teachers' experiences and their supervisors' perspectives of using electronic reflective journals during their field experience**

Mrs Shatha Almalki, University of Imam Abdulrahman bin Faisal

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster will describe a study that was designed to explore and understand Saudi pre-service teachers' experiences and their supervisors' perspectives when using technology to promote the reflection process in order to help them understand their work as teachers. An action research methodology and a narrative approach were adopted to collect qualitative data from a sample of 12 elementary pre-service teachers at the University of Imam Abdulrahman bin Faisal in eastern Saudi Arabia.

### **SOCPOST: Take a picture of religion: Engaging students at a distance through digital photography**

Dr Stefanie Sinclair and Dr John Maiden, The Open University

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster critically considers the pedagogical value of innovative activities that allow students to share and comment on each other's digital photographs, sound recordings and texts on an online platform. It assesses the strengths and limitations of this approach to personalised, multi-sensory learning through digital technologies in HE, with a particular focus on the impact on student engagement with complex concepts in blended and distance learning contexts. It is based on a case study exploring small group activities, both assessed and unassessed, that form part of a Religious Studies course (A227 'Exploring Religion: Places, Practices, Texts and Experiences') at the Open University.

### **SOCPOST: Uncovering expectations and perceptions of the final year undergraduate dissertation**

Dr Stephany Veuger, Northumbria University

Poster presentation, Ground Floor Lobby, 15:30-16:00

The overall objective this poster is to achieve wide reaching impact and uptake of our project findings and resources. The aim of the poster will be to give an overview of the goal of our project which was to provide structure and support to dissertation students and supervisors alike by developing research-informed resources that are accessible, engaging and student centred. We will present our key findings from questionnaires and interviews of both students and staff alongside reflexive comments of the student researchers themselves. This session will be presented by a representative student partner involved in the project.

### **SOCPOST: Aligning Blooms' Taxonomy with scaffolding, contextual and collaborative teaching methods to improve learner outcomes**

Dr Tanya Herring and Ms Omotolani Victoria Somoye, Bangor University

Poster presentation, Ground Floor Lobby, 15:30-16:00

This poster opines that Blooms' Taxonomy has a role in teaching beyond framing behavioural and cognitive learning objectives. The authors aver that in Business/Law disciplines, Blooms' Taxonomy should be used equally by the educator and learner. The poster will capture evidence-based practitioners' teaching experiences and illustrate how to apply andragogical principles to 'adult' learners. Once taught the elements of Blooms'

Taxonomy, adults have the capacity to self-direct their behaviour and cognitive ability to achieve course objectives successfully. The poster's aim is to illustrate how the educational practitioner can guide diverse self-directed learner cognitive-behaviour to successfully achieve course outcomes, goals and objectives.

### **SOCPOST: The importance of peer-to-peer learning in academic socialisation**

Mrs Susan Hardman and Grigorios Theodosopoulos, Brunel University London

Poster presentation, Ground Floor Lobby, 15:30-16:00

Do you ever get the feeling that your students think they know more than you do? The aim of this poster is to explore ways of directing this powerful leadership urge into effective learning for a whole cohort.

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## **Parallel Session 4 Social Sciences, 16:00 – 17:00**

### **SOC4.1a: OpenUp UEA: Supporting student wellbeing**

Dr Kamena Henshaw and Dr Laura Biggart, University of East Anglia

Oral presentation (20 minutes), Room 213, 16:00-17:00

This session will introduce a new student support app, OpenUp UEA, developed by students and Psychology academics at the University of East Anglia. The app features target common worries that students have when entering into higher education for the first time. The app features include: signposting students to available UEA and local support; an interactive campus map; a weekly planner; a budgeting feature; and an emotion mood tracker.

### **SOC4.1b: Getting a better understanding of our BAME students: We can get them in, but how do we encourage them to stay, progress and attain?**

Dr Jenni Jones, University of Wolverhampton

Oral presentation (20 minutes), Room 213, 16:00-17:00

BAME students now make up 20% of the UK HE student population. Yet, they still do not stay, progress and attain as well as their white counterparts. If we want our UK HE system to be truly inclusive, we need to look into why this is happening and what we can do about it. This study aims to understand what our (BAME and white) students think/feel in their first few weeks at our university, what the differences might be between BAME and white student reflections and what more can we do at our university to help and hinder their early journey into HE. This research is important because as Amos, as cited in Bushby (2018), stated 'we need to understand the barriers to BME student success so we can eliminate these gaps. We must ensure that students from all backgrounds can succeed.' (p.1)

### **SOC4.1c: Dyslexia diagnosis: Inconsistencies in assessment practices and the need for a holistic approach to support**

Mrs Katherine Blundell, Coventry University/Edge Hill University

Oral presentation (20 minutes), Room 213, 16:00-17:00

The emotional wellbeing of dyslexic individuals is given low priority (Alexander-Passe, 2006) and a call for a parallel assessment of emotional wellbeing for undergraduate students with dyslexia has perhaps gone unheard (Carroll and Iles, 2006). Presented are data from 20 semi-structured interviews with dyslexic adults as part of a larger, mixed-methods project

into the impact of dyslexia diagnosis. Emerging themes include the timing and focus of diagnostic assessment, dyslexia awareness, disclosure of disability, and metacognition. These interviews offer some insight into achieving a more holistic approach to meeting the needs of dyslexic individuals, to include wellbeing support and services.

### **SOC4.2a: Verbal peer-assessment and feedback as an economical tool for understanding assessment criteria**

Dr Nana Kufuor, University of Nottingham Ningbo China

Oral presentation (20 minutes), Room 214, 16:00-17:00

Students undergoing a transition into different education systems are typically unfamiliar with some assessment types and the associated criteria used to evaluate their learning. In this case, otherwise outstanding students appear to underperform. Thus, the outcome of assessments may not be indicative of the true performance of affected students. This could undermine student learning as students become dissatisfied, losing interest and inspiration for that matter. The present study proposes a practical and interdisciplinary teaching approach to address this problem and shows evidence of its effectiveness.

### **SOC4.2b: Authentic assessments in higher education**

Dr Flevy Lasrado, University of Wollongong in Dubai

Oral presentation (20 minutes), Room 214, 16:00-17:00

A key challenge for Business and Management educators, in an increasingly global context, is in encouraging 'authentic team work' within diverse student postgraduate cohorts. Through this presentation, we aim to discuss and find ways to maximise a holistic student learning experience through team-based projects whilst ensuring fair and accurate assessments for the same. It is therefore important to understand the challenges and opportunities for designing such an integrated assessment method for assessing teamwork within diverse postgraduate cohorts. We envisage that such an attempt would help increase both the quality of teaching and learning of postgraduate students, and its impact on students by preparing them for their future professional roles.

### **SOC4.2c: Exploring students' perceptions of assessment, feedback and moderation processes in higher education: A key to enhancing evaluation practices**

Dr Doron Cohen and Dr Paraskevi Argyriou, University of Manchester

Oral presentation (20 minutes), Room 214, 16:00-17:00

Research reveals that students' perceptions about assessment, feedback and moderation significantly influence their approaches to learning. We aim to provide insights into how assessment and feedback procedures are perceived by undergraduate Psychology students at the University of Manchester. We will discuss findings collected via mixed methods, and will reflect on students' perceptions of assessment procedures to improve both our educational practices and enhance our students' learning. Finally, we will introduce an innovative practice which aims to enhance students' perceptions and knowledge of assessment procedures, from question setting to marking and moderation.

### **SOC4.3a: Moodle: Can it engage students to improve their learning? Or should we forget it!**

Miss Anna Wos, Lancaster University

Oral presentation (20 minutes), Room 221, 16:00-17:00

The aim of this session is to present the findings from an ongoing project on the evaluation of Moodle use in teaching and learning. It has been taken for granted that VLE use is enhancing student experience by ease of access and level of information provided to students. However, the way that students access and process teaching materials is changing and therefore we need to re-evaluate the use of such digital environments. The session will present the initial findings of a pilot study and encourage discussion with colleagues about their experiences.

### **SOC4.3b: Central Saint Martin's Birkbeck MBA: A hybrid, blended disruptive MBA**

Dr Pamela Yeow, Birkbeck, University of London and Mr Damien Borowik, Central Saint Martins, University of the Arts London

Oral presentation (20 minutes), Room 221, 16:00-17:00

Central Saint Martins formed an institutional partnership with Birkbeck to develop and launch a new MBA. The MBA builds on the success of both institutions' existing provision. It represents an important evolution in each institution's portfolio, and was developed in response to the interest in, and increasing demand for, creative and critical approaches to the leadership and management of enterprises (commercial and social) that anticipate, respond to, and lead positive change. It is delivered via a blended online method, adopting flipped classroom and agile learning pedagogies. The MBA launched successfully in September 2017 with an initial cohort of 22 students.

### **SOC4.3c: Interdisciplinary learning: A whole new ball game**

Mr Barry Poskett and Mrs Barbara Chambers, New College Durham

Oral presentation (20 minutes), Room 221, 16:00-17:00

This session aims to introduce delegates to an interdisciplinary assessment opportunity that was developed as part of an enhancement project run within the School of Business, Management and Professional within New College Durham. The project aimed to develop collaborative teaching, learning and assessment opportunities across the school. Students from the BSc Sport and Exercise Development and BSc Podiatry worked together with podiatry patients in order to both introduce the sports students to patients with complex medical conditions, and to allow podiatry students to explore a variety of exercises that would form part of a management plan.

### **SOC4.4a: Sell yourself! Video CVs and e-portfolios for employability**

Ms Jane Challinor and Ms Dolores Ellidge, Nottingham Trent University

Oral presentation (20 minutes), Room 222, 16:00-17:00

This session will showcase an approach to preparing for employability that supports career development learning (Watts, 2006 cited in Dacre Pool and Sewell, 2007). The objectives of the session are to: briefly explain the idea of career development learning to enable students to research career opportunities and present themselves appropriately to prospective employers; outline the process by which students are supported to develop a digital artefact and articulate competences against a given person specification; and present examples.

### **SOC4.4b: Embedding employability skills into a new module by diversifying assessment in collaboration with students**

Mrs Amanda Millmore, University of Reading

Oral presentation (20 minutes), Room 222, 16:00-17:00

Focusing upon the importance of embedding employability skills into more diverse assessments and our innovative collaborative student-focused approach, this session will introduce our collaborative staff-student partnership approach to designing assessments for a new Law module. Law can be a very traditional subject with rather staid assessments, so working in partnership with students, we actively sought student input to explore their views on assessments, looking at the types of assessment, weighting and timing. The result is an innovative module format, with novel assessments for Law undergraduates, reflecting the key employability skills identified by staff, students and employers.

### **SOC4.4c: Embedding employability in course design: An international experience**

Dr Xiaowen Gao, University of Greenwich

Oral presentation (20 minutes), Room 222, 16:00-17:00

Employability is an increasingly important part of students' experience in UK universities. Embedding employability knowledge within ordinary teaching offers the opportunity to combine students' employability development with subject learning but is disliked by educators since lecture time is usually only sufficient for the required subject knowledge. We present an embedded design that allows employability skills to be developed without requiring additional time. It has been adopted in an undergraduate module delivered to students at one of University of Greenwich's partners in China. It has helped them improve their employability skills and be better prepared for their study at UK universities.

### **SOC4.5a: 'Words divide, pictures unite': A short film about visual pedagogy and assessment**

Dr Dave Green and Mr John Bird, UWE Bristol

Oral presentation (20 minutes), Room 223 A, 16:00-17:00

We are presenting a short film - based upon our joint research and experience of teaching visual sociology at UWE - which details ways in which innovative visual forms of teaching, learning and assessment can be employed as part of inclusive digital and visual pedagogies in HE. The film details the importance of visual assessment in an increasingly visual and digitised knowledge society; the role that students can play as "visual prosumers" and co-creators of knowledge; gives examples of visual assessments we have used; and, outlines ways in which the visual can be embedded in teaching and assessment.

### **SOC4.5b: Learn before the lecture: An inquiry into a flipped classroom design in undergraduate Economic teaching**

Dr Nadia Singh, Northumbria University

Oral presentation (20 minutes), Room 223 A, 16:00-17:00

Undergraduate Economics teaching is currently dominated by the traditional "chalk and talk" style of lecturing. There has been little progress in the implementation of alternative learning pedagogies in undergraduate Economics classrooms. A growing body of research has advocated for the use of active learning techniques in undergraduate Economics teaching with a view to improving student engagement and learning outcomes. In this presentation, the author describes her experiment with a flipped classroom model in a second-year

Macroeconomics module. The presentation will outline the methodology used to redesign this course and presents the main findings and resulting outcomes from the experiment.

### **SOC4.5c: Enhancing meaningful learning of undergraduate Business students by introducing feedback scaffolding**

Dr Emmanuel Arakpogun, Northumbria University

Oral presentation (20 minutes), Room 223 A, 16:00-17:00

This presentation presents the results of a teaching intervention which aimed to maximise first-year undergraduate students' meaningful learning by facilitating a teaching environment that is conducive for their zone of proximal development (ZPD). Feedback scaffolding is discussed as a useful pedagogical tool introduced on the undergraduate Business course to address educational challenges associated with undergraduate students' transition to higher education.

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## STEM Strand

### Parallel Session 1 STEM, 11:20 – 12:20

#### **ST1.1: It does exactly what it says on the box: Achieves higher levels of engagement and deeper learning at any level on any topic**

Mr James Leinster and Dr Michael Coffey, Nottingham Trent University

Interactive breakout session (60 minutes), Room 223 B, 11:20-12:20

This interactive breakout session explores how to bridge the gap between silos to improve student learning across subject areas and from previous modules and therefore mediate the risk of scrap learning. The aim of this session is to get introduce delegates to the 'Creative Connections' learning tool. The aims of the session are to: explain the tool and how it can be used to on any topic and any level of study; discuss how the tool can increase engagement and deeper learning; and for delegates to use the learning tool and consider how it can be applied by delegates in their professional practice.

#### **ST1.2: This house believes that students are not just faces in the crowd: Opportunities, benefits and challenges involved in developing learning and teaching partnerships in large classes**

Dr Anastasios Tombros, Dr Ana Cabral and Dr Jim Donohue, Queen Mary University of London

Workshop (60 minutes), Room 224 B, 11:20-12:20

This workshop offers delegates the opportunity to reflect on their approach to teaching and their role in promoting learning and teaching partnerships that aid transition and retention, especially in the context of large classes. The workshop is based on the experience of the first author which sets the scene for the preparation of a parliamentary style debate.

Participants are invited to prepare and discuss the motion: This house believes that students are not just faces in the crowd. This creates the context for arguing for and against the opportunities, benefits and challenges in developing teaching and learning partnerships.

#### **ST1.3: Novel training for undergraduates to respond to chemical incidents or attacks**

Dr Antonio Peña-Fernández, De Montfort University, Dr Maria del Carmen Lobo-Bedmar, IMIDRA and Professor Raquel Duarte-Davidson and Dr Stacey Wyke, Public Health England  
Workshop (60 minutes), Room 224 C, 11:20-12:20

Training to combat chemical incidents is critical for health professionals due to recent events involving the release of chemical hazards and terrorist attacks involving chemical weapons. Health professionals need to have appropriate knowledge and skills to respond to future chemical incidents. There is a lack of teaching these competences in Europe. A group from different European universities have created an effective short training course for providing undergraduate students with basic skills to respond to chemical incidents. This workshop will show how we use novel web-based tools and guidance developed by Public Health England to deliver this training.

### **ST1.4: An introduction to the light board pedagogy**

Mr Will Doherty, University Centre Blackburn College

Workshop (60 minutes), Room 226, 11:20-12:20

The Light Board project has been launched and trialled at Manchester and Strathclyde University in order to support online learning and creativity by moving away from bullet point slides to interactive free-hand scripting. This session will introduce the concept, current research and showcase success across the US and Europe using this device. In addition delegates will be invited to build and trial a prototype for their own use when teaching online. Finally views and feedback will be taken as well as the opportunity to join the research and continue exploring how the device can support and augment blended learning.

### **ST1.5: TBC**

TBC

TBC

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## **Parallel Session 2 STEM, 13:20 – 14:20**

### **ST2.1a: Engineering telecollaboration for Language learning**

Mr David Tual, Cambridge University and Ms Julie McDonald, CentraleSupélec

Oral presentation (20 minutes), Room 223 B, 13:20-14:20

This session will present a pilot project launched in 2018 between a British and a French Engineering school. After having provided some background to this initiative, this presentation will outline the pedagogical principles behind the telecollaborative activities that were designed for the students, the course objectives and the outcomes. Time will also be dedicated to describing the implementation of the project before delving into the challenges and rewards met on the way. The session will conclude by looking into the future of the scheme.

### **ST2.1b: Sta(r)tistics: A Massive Open Online Course (MOOC) to teach Statistics in Biomedical Sciences**

Dr Katrin Jaedicke and Ms Sonya McChristie, University of Sunderland

Oral presentation (20 minutes), Room 223 B, 13:20-14:20

In general, as soon as students of most disciplines hear the word statistics, you will experience a change of the atmosphere in the room to one of gloom and uselessness. Comments such as “I have never understood maths”, or “I might as well give up now” are far too common. The aim of this session therefore is to demonstrate that by using the MOOC "<https://www.canvas.net/browse/university-of-sunderland/courses/statistics-for-everyone>" it actually is possible for students to achieve a good statistical understanding whilst still enjoying working with a difficult material.

### **ST2.1c: Reactions and resistance to a university interdisciplinary learning initiative in a STEM faculty**

Dr Ian Stewart, University of Manchester

Oral presentation (20 minutes), Room 223 B, 13:20-14:20

This session will present on the early findings of research into the response of The Faculty of Science and Engineering (FSE) at The University of Manchester to the University's intention to increase interdisciplinary learning (IL) through its University College for Interdisciplinary Learning (UCIL). Of all the faculties, the FSE has the lowest uptake of IL and in some schools, there is none, instead: resistance. This research is the first to develop a unified picture of the response of a STEM faculty to the idea of IL with disciplines beyond STEM. Delegates will be able to interactively evaluate the proposed reasons for poor uptake.

### **ST2.2a: Progress on national pooling infrastructure for remote laboratories**

Professor Timothy Drysdale, University of Edinburgh

Oral presentation (20 minutes), Room 224 B, 13:20-14:20

Colleagues from universities in England, Scotland and Wales have joined forces to begin the design of a national pooling infrastructure for remote laboratories, with the aim of increasing the scale, diversity, resilience and throughput for online practical work sessions using real equipment. This talk will bring session participants up to date with the requirements captured so far, and their prioritisation. In a time of increasing desire for project-based learning, remote laboratories offer a way for conventional campuses to increase the number of hours of practical work whilst retaining the existing traditional laboratory provision, resulting in a blended learning experience. A common approach also facilitates the dissemination of future pedagogical developments.

### **ST2.2b: An investigation into the impact of individual differences on immersive learning environment preparedness training**

Dr Sarita Robinson and Mr Michael Constantine, University of Central Lancashire

Oral presentation (20 minutes), Room 224 B, 13:20-14:20

Immersive learning environments, such as the Hydra/Minerva Suite, use sophisticated technology to recreate emergency situation scenarios in a controlled environment. Using video, audio and written communication, as well as live action role play, immersive learning environments allow participants to practice and develop their emergency management skills. Immersive learning has been shown to enhance problem solving and decision making in high pressure situations. However, limited research has been undertaken to assess how individual differences impact on people's experiences of immersive learning environment training. This session will outline how a student's personality traits, and current mood state, can impact on engagement with Hydra/Minerva training.

### **ST2.2c: Experience with designing for failure in STEM**

Ms Nilanjana Saxena

Oral presentation (20 minutes), Room 224 B, 13:20-14:20

How can HE institutions adequately equip graduates for the evolving workplace? While curriculum re-alignment to cater to 21st-Century learning outcomes is important, teaching practice must also keep in step. In this regard, I share my experience of working and designing an innovative approach at an Australian Edtech startup, using Productive Failure (PF), simulations and multi-user virtual environments. Participants will observe a practical example of PF and learn about a design strategy for deeper learning. While I will speak from a STEM standpoint, the learning design package can be applied within any discipline under HE/workplace learning.

### **ST2.3a: The challenges of teaching a Computer Science Capstone team project to a large cohort of undergraduate students**

Dr Tom Prickett and Dr Alan Godfrey, Northumbria University

Oral presentation (20 minutes), Room 224 C, 13:20-14:20

The employability of Computer Science graduates has received considerable recent attention by the Shadbolt review and following initiatives. Graduate employability normally requires highly development interpersonal and team skills. These skills are best developed by experience. A common mechanism for this development is a capstone team project. This presentation will explore the challenges of running one such level 6 team software development project to a cohort of 200 students. In our version of the team project each group of students complete a different project agreed in consultation with the teaching team.

### **ST2.3b: Innovative practices that aid employability: Technical Writing Pathway in the School of Electronic Engineering and Computer Science, Queen Mary University of London**

Dr Tijana Timotijevic, Dr Ana Cabral, Dr James Donohue, Dr Akram Alomainy and Dr Antonios Kaniadakis, Queen Mary, University of London

Oral presentation (20 minutes), Room 224 C, 13:20-14:20

In this session we aim to present the Technical Writing Pathway project (TWP), a cross-programme initiative. Over the next two years the TWP project will develop a pathway through the three years of undergraduate study in the School of Electronic Engineering and Computer Science (EECS) and define a structured approach to writing development for academic and employment purposes. In this current pilot year, the focus is on the Electronic Engineering strand. Our presentation will reflect on writing as a learning tool and an employment skill, on the scalability and standardisation of writing assessment, and on the benefits and challenges of the TWP.

### **ST2.3c: Using hackathons to improve the teaching and learning of entrepreneurial skills**

Dr Alfonso Avila-Merino, University of East Anglia

Oral presentation (20 minutes), Room 224 C, 13:20-14:20

This session aims to shed light on the issues and processes associated with the use of hackathons to teach practice-based entrepreneurial skills to undergraduate students at UEA. Benchmarks of the pedagogical tools currently used to nurture the above mentioned skills will be presented and how are they used and enhanced by the students participating in the hackathon called Sync the City. Many of the subjects taught in business schools favour the strategic/theoretical approach instead of an approach that is not connected with the reality of organisations outside universities. By using a hackathon, students establish a connection with external organisations and individuals to practice entrepreneurial skills, which are assumed to be acquired at the university.

### **ST2.4a: Gendered transition from school to university for Life Science students: A case study exploring the role of self-efficacy**

Dr Magda Charalambous, Imperial College London

Oral presentation (20 minutes), Room 226, 13:20-14:20

A mixed-method study was undertaken to investigate factors affecting transition to university of Life Science students at a UK university. A questionnaire sought to quantify the views of Life Sciences undergraduate students with regards to their perceptions of their transition to university level study. Year 1 exam scores were analysed to see whether there was a difference between genders in performance. Finally, focus group interviews explored the perceptions of female students of the transition to university. Recommendations were made to change teaching practice to improve self-efficacy.

### **ST2.4b: Inclusivity by student choice in research-led modules**

Dr Suzanne Ruddy and Dr Michael Baron, University College London

Oral presentation (20 minutes), Room 226, 13:20-14:20

A specialist research project in metagenomics and the advanced investigative project in Molecular Biosciences provide an inclusive curriculum through allowing students freedom to develop their own theme. This specialist research project replaces the traditional research laboratory project with an advanced metagenomic investigation of environmental microbiomes. Students develop their own hypotheses and analyse their unique data using a large-scale computational approach. This module is balanced with an independent literature review of a topic of the student's choice. Both approaches have been effective in engaging the students through ownership of their investigations, facilitating inclusivity and achieving their maximum potential.

### **ST2.4c: Unseen disabilities in undergraduates: An invisible opportunity for collaborative group learning?**

Mr Garry Bishop, University of Cambridge and Ms Maria Morahan, University of Northampton

Oral presentation (20 minutes), Room 226, 13:20-14:20

Students without disabilities and those with unseen disabilities (UD) participated in a 5 day group work employability initiative aimed at "developing problem solvers, innovators and leaders of the future". Difficulties encountered in the group work focused on the perception of students with unseen disabilities by their non-disabled peers. These students were often selected for group work not on the basis of their strengths as group contributors, but on the basis of perceived weaknesses for the group. The consequence of this was a loss to the group of the possible individual contributions which could be made by these group members.

### **ST2.5a: Student "maker" clubs: (Re)engaging students through interdisciplinary hands-on workshops**

Mr Kerry Truman and Dr Paul Whitehouse, Nottingham Trent University

Oral presentation (20 minutes), Room 227, 13:20-14:20

With student retention and engagement a high sector priority, this session will present a practical "how to" approach in developing extracurricular "making" programmes, targeted at disengaging students, based on the successful NTU Maker Club programme at Nottingham Trent University. The presentation will cover the use of data in identifying minimal engagement, a range of project-based interventions, and how the NTU Maker Club has

expanded to include a platform for staff/student wellbeing, collaborative learning, and developing inclusive learning environments.

### **ST2.5b: A liberal undergraduate civil engineer: Read all about it!**

Dr Mike Murray, University of Strathclyde

Oral presentation (20 minutes), Room 227, 13:20-14:20

This session provides evidence from a portfolio of constructivist aligned pedagogy that promoted a “reading for a degree” culture with undergraduate Civil Engineering students (2009-2019) at a university in Scotland. Engineers are said not to be “booky people” and this case study will address the disciplinary epistemic issues that may contribute to this stereotype. This session reflects upon the extent to which the various learning objectives were met, and the usefulness of the results in regards to disseminating the practice adopted across the disciplines in higher education.

### **ST2.5c: Recognising the impact and achievements of graduate teacher assistants in STEM subjects, through tailored training and peer-mentor support pathways mapped against the UKPSF**

Dr Jenny Slaughter, Dr Thomas Rodgers and Dr Claudia Henninger, University of Manchester

Oral presentation (20 minutes), Room 227, 13:20-14:20

Graduate Teaching Assistants, GTAs, are essential in the STEM subjects. They provide vital, hands-on expertise in laboratory and research skill-based classes, a near-peer link for students, and the ability to implement small group teaching strategies, with better staff-student ratios. Our presentation will discuss professional development opportunities for GTAs, and the barriers and challenges GTAs face in engaging with these opportunities. We will highlight the interventions we have put in place to support GTAs’ professional development and how we have sought to overcome barriers to engagement. We will also show how building a mentoring community is supporting GTAs seeking recognition.

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## **Parallel Session 3 STEM, 14:30 – 15:30**

### **ST3.1a: A new academic-branded blog to enhance the curriculum, innovate pedagogy and engage the society**

Dr Stefano Sandrone, Imperial College London

Ignite presentation (5 minutes), Room 223 B, 14:30-15:30

Communicating science to engage the public and inspire the society is an important action for scientists, and, more generally, citizens around the globe. However, not many educational platforms or training activities in line with this aim are routinely integrated within MSc curricula. The key object of this session is to discuss pivotal insights following the design and the successful implementation of a novel, academic-branded, MSc students-led blog to enhance the curriculum, innovate pedagogy and engage the society.

### **ST3.1b: Managing student expectations using the ‘ideal’ university student survey: Induction with Design Engineering undergraduates**

Dr Tiffany Chiu and Dr Freddie Page, Imperial College London

Ignite presentation (5 minutes), Room 223 B, 14:30-15:30

With the marketisation of higher education, students are increasingly constructed as consumers with diverse and increased expectations. We recognise the challenges of the

transition from school to university where students are often unclear what is expected of them. This session demonstrates an innovative method that generates discussion with students on what it means to be a university student. We will discuss how we use the 'ideal' university student survey (developed from an ongoing project) as part of induction exercises in an Engineering programme at a pre-92 English university to address potential mismatches between student and staff expectations.

### **ST3.1c: The realities of engaging Foundation Year STEM students with Mathematics using TBL**

Miss Rebecca Broadbent and Dr Thomas Davenport, Aston University

Ignite presentation (5 minutes), Room 223 B, 14:30-15:30

The experiences of a teaching team's implementation of team-based learning (TBL) within the core mathematics modules on an Engineering and Applied Science Foundation Programme are presented in this session. Although at an early stage within the research, reflections on introducing TBL in practice, along with the data collection strategy aimed at determining the strengths and limitations of the approach in building student mathematical efficacy and ability, will be discussed.

### **ST3.2a: Facilitating student research in a distance learning setting**

Dr Helen Kaye, The Open University

Ignite presentation (5 minutes), Room 224 B, 14:30-15:30

Final year Psychology students must complete a substantial empirical project as part of their British Psychological Society accredited degree - a challenging task in the context of online learning. Alongside substantive material, The Open University developed a set of bespoke online resources to support students, including: self-directed interactive activities that allow students to explore the methodologies available to them; "supervision forums" where ideas are shaped into viable and valuable projects under the guidance of tutors; and virtual poster sessions for disseminating findings. These resources are described and evaluated as tools to facilitate students' understanding of how to do rigorous psychological research.

### **ST3.2b: Helping students help themselves: The application of low-stake, instant feedback, driving small incremental improvements to immerse students in course content**

Mrs Mandy Morrell, University of Northampton

Ignite presentation (5 minutes), Room 224 B, 14:30-15:30

The instant-immediate world contemporary students have grown up in can provide us with insight into relating HE to a new breed of learners. The project behind this session aims to improve measurable performance through the application of low stake, instant feedback immersion into module content. The project encourages students to accept iterative 'failure and learning cycles' to achieve small increments of achievement, and therefore develops resilience and engagement. This is achieved through evaluating the impact of regular student interaction with short challenges and their correlating assessment grades, comparing achievement based on self-motivation with tutor-initiated interaction. This session introduces a broader investigation into motivational factors and gaming style rewards.

### **ST3.3a: Promoting learner autonomy and engagement through peer-assisted study sessions for international students**

Ms Katherine High, University of Bristol

Ignite presentation (5 minutes), Room 224 C, 14:30-15:30

This presentation aims to provide a captivating overview of an experimental teaching and learning framework at the University of Bristol for international foundation students preparing for undergraduate studies. Central to the curriculum are the students themselves, who take ownership of their subject-specific learning during weekly peer-assisted study sessions (PASS) as well as teacher-facilitated sessions where they review and preview their weekly course content. As well as improving subject knowledge, students develop a range of key transferable skills such as collaboration, resilience and critical thinking. Such provision is highly applicable to home as well as international students.

### **ST3.3b: Pride and Prejudice and technology (that enhances learning)**

Ms Katie Stripe, Imperial College London

Ignite presentation (5 minutes), Room 224 C, 14:30-15:30

It is a truth universally acknowledged that a university in possession of TEF Gold must be in want of technology (Austen (ish), 1813). Professors Darcey and Bennett show how the IMPLEMnT project uses community to support and facilitate change in the use of technology as a tool for teaching excellence.

### **ST3.3c: Adopting mobile phones into higher education learning environments: Practicalities and implications for pedagogic practice**

Mr Colin Hardacre and Mrs Nathalie Goodchild, SRUC

Ignite presentation (5 minutes), Room 224 C, 14:30-15:30

This presentation will disseminate preliminary results and add to the body of knowledge regarding: how students prefer to use smartphones in HE learning environments; the potential for interference and distraction; and how potential negative impacts might be mitigated.

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## **Poster Presentations STEM, 15:30-16:00**

### **STEMPOST: Teaching and learning public health: A #DMUglobal perspective**

Dr Antonio Peña-Fernández, De Montfort University and Dr Maria del Carmen Lobo-Bedmar, IMIDRA

Poster presentation, Ground Floor Lobby, 15:30-16:00

De Montfort University (DMU, UK) has created a specific programme named #DMUglobal that includes the Erasmus+ and #DMUglobal academic-led trips. These trips involve a short-term visit outside the UK and are offered to any student enrolled in specific programmes at DMU. To promote global public health, 50 final year students from three different health programmes travelled to New York (USA) in January 2019. Students monitored the presence of emerging human pathogens in animal faecal samples in urban parks in-situ using immunoassay cards. Preliminary feedback collected indicated that the activity helped understand public health, acquire international experience and broadened cultural horizons.

## **STEMPOST: Investigating learner perceptions and outcomes of the flipped classroom in Foundation Chemistry classes**

Dr Beverley Allan, University of Nottingham

Poster presentation, Ground Floor Lobby, 15:30-16:00

To develop a more inclusive and accessible learning experience for the diverse nature of foundation students, a flipped methodology was introduced to assess whether this could improve learners' understanding and attainment. Statistical analysis of exam performance provides some evidence that the fully flipped approach had a positive impact on attainment and the learners' perceptions for a simpler topic, but there is no evidence to suggest the same improvements for a more complex topic. From the analysis outcomes and the learner experience, it is suggested that the flipped methodology be used as part of a mixed methods approach to teaching.

## **STEMPOST: Supporting Foundation Science students in constructing arguments about socio-scientific issues: Designing an educational intervention**

Ms Caroline Anderson, University of Nottingham

Poster presentation, Ground Floor Lobby, 15:30-16:00

The ability to synthesise and summarise information from a variety of sources to arrive at a critical judgment is an expected outcome of Biosciences undergraduate degrees (Quality Assurance Agency, 2015). While some students enter higher education able to search for, select and synthesise sources, many find working with multiple documents challenging (Stadtler, 2017). In order to support Foundation Science students in successfully constructing arguments about socio-scientific issues from multiple documents, a short-term educational intervention was designed. The aim of this poster is to explain how changes made to a series of learning and teaching activities were informed by previous research about beliefs about knowing, multiple document comprehension and argumentation.

## **STEMPOST: The use of serious games in Chemistry teaching at Levels 4 and 5**

Mr David Cross, The University Centre North Lindsey College, Ms Katie Howard, Bishop Grosseteste University and Ms Hollie Shaw, Sheffield Hallam University

Poster presentation, Ground Floor Lobby, 15:30-16:00

The aim of this poster is to describe the use of serious, low tech, games in Chemistry teaching and to share the findings of a small research project looking at student perceptions of this approach. Former students who have experienced this approach will co-present.

## **STEMPOST: Effective assessment and feedback in a Software Engineering group project**

Dr Ling Ma, Queen Mary University of London

Poster presentation, Ground Floor Lobby, 15:30-16:00

An innovative assessment and feedback method for a Software Engineering group project has been experimented in a large class of 650 students. The aim of this project is to give students immediate, constructive and continuous feedback. The approach is to divide the submission and demonstration into three stages following the Agile process. At each stage, each group is given a one-to-one assessment and feedback session through live demonstration and Q/A. The objectives are to improve students' presentation and team-

working skills. It also improves the recognition of individual contribution towards the group project.

### **STEMPOST: Using e-learning to enhance student engagement with laboratory-based learning**

Dr Nigel Francis, Swansea University

Poster presentation, Ground Floor Lobby, 15:30-16:00

Online pre-lab simulations and post-lab workbooks allow students to prepare better for the requirements of laboratory-based learning. In this study, pre- and post-lab resources were made available to 174 first-year students with 96 students making use of one or more of the pre-lab simulations. Initial findings show that overall cohort marks improved in the year following the introduction of eLearning assessments and that female students engaged more with these resources.

### **STEMPOST: Developing the employability skills and professional competencies of students on a Biomedical Sciences course: Piloting a skills-mapping approach across a three-year undergraduate programme**

Dr Paul Stronge, Dr Gwen Hughes, Dr Benjamin White and Dr Stan Ko, University of Nottingham

Poster presentation, Ground Floor Lobby, 15:30-16:00

The main aim of this poster presentation is to set out the preliminary results of a longitudinal and cross-modular initiative intended to identify and enhance the key transferable and employability skills and professional competencies acquired by our BSc undergraduates over the course of a three year Biomedical Sciences degree. In 2018-19 we have piloted an integrated approach which involves the introduction of digitalised mapping elements from the very start of the curriculum so that students themselves are able to both monitor and track their accumulation of key skills and competencies. The poster will present students' and teaching staff's feedback and reflection on the effectiveness of these innovations and highlight relevant process learning.

### **STEMPOST: Pokemon Go as a cognitive and societal developmental tool**

Dr Robert Costello, Newcastle College

Poster presentation, Ground Floor Lobby, 15:30-16:00

The aims of the research project behind this poster are to identify specifics relating to the development within gamification using cognitive development within HE. This will involve a critical analysis of the different types of pedagogical approaches, while looking at how the researcher can implement a new novel approach to enhance the learning centrality experience. The project aims to: evaluate aids in cognitive development in adolescents through gamification; use gamification techniques to monitor interactivity through using Pokémon Go within teams to improve motivation techniques; critically analyse increased level of engagement and retention in classrooms and support from Level 4 to Level 6; and monitor accessibility in the classroom through the different networks within teams.

### **STEMPOST: Supporting the transition to academic writing in higher education**

Dr Sally Quinn, University of York

Poster presentation, Ground Floor Lobby, 15:30-16:00

The transition to HE presents students with a number of social and academic challenges. One of these is understanding and meeting the expectations for academic coursework at

university. The project behind this poster aims to support students by providing systematic instruction in academic writing to students in their first year. This instruction consisted of online resources and small, interactive tutorial sessions. Both online resources and tutorials were structured around the departmental marking criteria. Measures of student writing self-efficacy were taken at several points throughout the year to track any changes. This poster will report on the results of this project.

### **STEMPOST: Enhancing student interpretation of feedback using videos**

Dr Sally Quinn, University of York

Poster presentation, Ground Floor Lobby, 15:30-16:00

Students often report that they find it difficult to interpret feedback on their assessments, particularly in relation to knowing how to improve future work. This project developed a series of 'How to ...' videos that explained how to effectively carry out different elements related to essay and practical report writing. These videos were available for students to access at any time but links to appropriate videos were also included in feedback on student work. This poster will report on focus group sessions with students to gain an understanding on how useful the videos were.

### **STEMPOST: Interactive learning in higher education**

Dr Sarita Robinson and Dr Jamie Taylor, University of Central Lancashire

Poster presentation, Ground Floor Lobby, 15:30-16:00

Playful Learning has been suggested as one way in which we can enhance learning in higher education (HE). Further, widening participation and changes in teaching styles earlier in the education system mean that students expect more than the traditional single voice oral presentation. This poster presentation will present the results of a survey which explored students' experiences and perceptions of the interactive activities they had experienced in HE lectures. We will also report best practice regarding the use of inclusive interactive activities.

### **STEMPOST: A comparative study of take-home case study versus closed-book exam for Mathematics, in a cohort of Foundation Year Engineering students**

Dr Sumathy Arumuganathar, CU London

Poster presentation, Ground Floor Lobby, 15:30-16:00

Assessment is a very influential tool that enhances student learning. This poster focuses on two widely used assessment methods for Mathematics and their influence on grades, fairness and student learning. Groups of Foundation Year Engineering students were assessed by a take-home case study and also by a closed-book exam. A significant difference in grades was observed between the take-home case study and closed-booked exam for less achieving students, but no difference in assessment grades was noted between closed-book exam and take-home case study for high achieving students.

### **STEMPOST: An innovative web-based tool to solve group marking issues**

Dr Suraj Ajit, University of Northampton

Poster presentation, Ground Floor Lobby, 15:30-16:00

Group/Team work is an important element in most (if not all) courses in higher education. Assessment of group work has always been challenging. Problems include inconsistent marking processes and potentially unfair scoring/grading methods. Our study reviewed

group marking processes across several courses including Software Engineering, Computing, Business Computing, Web Technology and Security within one university. The key challenge faced by all is: “How can the marks from a lecturer and students within a group be combined in a fair way to produce a single score for each student?” This poster reflects the preliminary results of evaluating a tool that has been developed to tackle the above challenge. The tool is based on a sound mathematical model.

### **STEMPOST: Maximising your environment by the application of Blended Classroom Response System**

Dr Maryam Malekigorji and Dr Taher Hatahet, Queen's University Belfast

Poster presentation, Ground Floor Lobby, 15:30-16:00

Previously, we described the use of flipped classroom strategy coupled with team-based learning approach (FTBL). In present study we blended Classroom Response System (CRS) with flipped classroom approach. CRS allows students to answer questions remotely in a real time manner and encourages them to engage with classroom activities. Our flipped CRS approach requires the students to preview the material and watch the recorded lectures before the sessions and apply their knowledge within the session either individually or as teams. Results shows students' collaboration with one another was strongly associated with their positive feedback while using flipped CRS approach especially as teams.

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## **Parallel Session 4 STEM, 16:00 – 17:00**

### **ST4.1a: The good, the bad and the ugly of team-based learning in a blended learning environment: The student view**

Dr Prabha Parthasarathy, Imperial College and Dr Andrea Manfrin, University of Sussex

Oral presentation (20 minutes), Room 223 B, 16:00-17:00

Team-based learning (TBL) is an active learning strategy. At the University of Sussex, this was implemented in a blended learning environment across two different courses in Life Sciences. In this session, we will discuss our teaching approach and results from a survey that aimed to determine student perceptions towards TBL when they encounter it in a blended model across a 12-week teaching term for the first time. Through a quantitative and qualitative analysis of data, we will provide insights on what works and what doesn't. We also aim to determine what influences these perceptions.

### **ST4.1b: The implementation of a novel collaborative learning module to introduce Pathology to first year Biomedical Science undergraduates**

Mr Gavin Knight, University of Portsmouth

Oral presentation (20 minutes), Room 223 B, 16:00-17:00

This presentation aims to outline the processes involved in the implementation of a year-long 20-credit module based purely on an innovative collaborative learning initiative to develop undergraduate Biomedical Science students' understanding of pathology. Heavily reliant on a design-based research methodology and a fading scaffold approach to student support, the processes involved in designing and administering activities to promote student collaboration and independence will be discussed, the outcomes of this four-year study reported, and mechanisms to introduce this style of teaching and learning at other HEIs will be identified.

### **ST4.1c: Escape Room Revision**

Dr Jon Tandy, London Metropolitan University

Oral presentation (20 minutes), Room 223 B, 16:00-17:00

The promotion of innovative problem solving is extremely important within Chemistry. To utilise higher order cognitive skills and process abstract concepts, learners increasingly need to be engaged in the excitement of the subject using creative, application-based exercises. This presentation outlines the implementation of a scenario-based, Chemistry “escape room” currently piloting at London Metropolitan University. This 45-minute activity involves students working in small groups to find and solve multidisciplinary, hands-on problems, based around previously learnt material, to obtain parts of a code and subsequently complete the task. It is hoped that colleagues will be inspired to adapt the concept for their own teaching.

### **ST4.2a: Forensic casework examination: Taking the fear out of embedding employability into a module**

Mr David Butler and Ms Emma Rixon, Nottingham Trent University

Oral presentation (20 minutes), Room 224 B, 16:00-17:00

The Forensic Casework Examination module was designed to allow students to take on the role of a Forensic Casework Examiner and work alongside a range of professional forensic practitioners. The emphasis was placed on the development of skills and competencies relevant to the current industry needs. Traditional lectures have, to a large extent, been replaced with a workshop-based approach to learning. Evaluation of the module by the teaching team, students, External Examiners and the professional body, was very positive and the innovative approach was widely praised.

### **ST4.2b: Making the links between the dissertation process and employability: Harnessing the voice of alumni**

Dr Rachel Kirk and Mr David McGuinness, Northumbria University

Oral presentation (20 minutes), Room 224 B, 16:00-17:00

This presentation examines the importance of embedding employability within a dissertation module and how to make this more transparent to students. While the dissertation encapsulates key employability skills (e.g. project management, critical reflection), it can be perceived as an academic hurdle to be jumped. This presentation reports on research conducted with former students, outlining insights from their retrospective experience of doing a dissertation, before going on to illustrate how this voice can be utilised to enhance the learning support and engagement of current students through the creation of a ‘talking heads’ video.

### **ST4.2c: Diversifying assessments for MSc-level Molecular Biology students to promote employability**

Dr Louise Newnham, University of Sussex

Oral presentation (20 minutes), Room 224 B, 16:00-17:00

Essay-writing is a popular method of assessment for most undergraduate courses. However, the ability to write a good essay under exam conditions is not necessarily preparing students for successful postgraduate careers in Biosciences. In order to help extend the repertoire of skills acquired by our graduates, we have redesigned our assessments for MSc-level modules in a way that promotes analytical thinking and ability to communicate effectively when discussing science. We have replaced some essay-based assessments with a mix of

poster presentations, assessed journal clubs, online quizzes with in-built feedback and viva examinations which have been well received by our students.

### **ST4.3a: Using Snapchat as a tutorial tool in higher education**

Mrs Suzanne Faulkner, University of Strathclyde

Oral presentation (20 minutes), Room 224 C, 16:00-17:00

International students express self-perceived language deficiencies and differences in educational background. These challenges impact on the ability of these students to participate fully in class or group work activities. It is appreciated that the challenges identified in relation to international students may be experienced by all students, including home students, to varying degrees. Having used Snapchat as a tutorial tool with the undergraduates in Prosthetics and Orthotics at the University of Strathclyde, for the last two academic years, the level of engagement with the Snapchat tutorials of both home and international students has been very encouraging. How could you use Snapchat as a tutorial tool to enhance engagement with your students?

### **ST4.3b: Supporting the international student transition: The English-Mandarin video glossary for Environmental Science students**

Dr Katie Szkornik, Keele University

Oral presentation (20 minutes), Room 224 C, 16:00-17:00

Students from China coming to study in the UK face significant language and cultural barriers. Studies show that despite extensive post-arrival support, English language issues, particularly a lack of discipline-specific vocabulary, remain a major barrier to achievement. This study showcases the design, delivery and evaluation of a subject-specific 'video glossary', which was introduced to Chinese students studying in China prior to their transition to higher education in the UK. Results suggest the Chinese students found the resource helpful for familiarising themselves with different accents, body language and teaching styles of UK-based academics, as well as improving their discipline-specific vocabulary.

### **ST4.3c: Adaptive, online bridging courses for personalised learning**

Dr Yong Lim Foo, Dr Yong Lim Foo and Professor Han Tong Loh, Singapore Institute of Technology

Oral presentation (20 minutes), Room 224 C, 16:00-17:00

This presentation focuses on a strategic initiative at Singapore Institute of Technology to encourage our incoming students to revise and enhance their math skills in preparation for their university studies. It also narrows the competency range so that the year1 module can be mounted successfully. The initiative includes the development of an adaptive online system that allows students to progress at their own pace and with tailored support and feedback, with the backup of face-to-face sessions for students that struggle to make progress on their own. The system showed to improve students' skills by an average of 20%, narrowed the variance in knowledge between students, improved students' confidence level in their skills and is correlated with improved retention amongst year-1 students.

#### **ST4.4a: Are we using technology for its novelty value or because it is useful?**

Dr James Walker and Ms Lauren Knowles, University of Nottingham Ningbo China  
Oral presentation (20 minutes), Room 226, 16:00-17:00

Current priorities in higher education are focusing on increasing student engagement. Presented in this session are the findings of a year-long interdisciplinary study which attempted to increase student interaction and engagement by incorporating real-time in-class technologies. The results demonstrate that students are strategic in their use of the technology and criticise its application to situations when face-to-face interactions could occur or when it does not fit their purpose. Staff autoethnographic reflections on their use of the technology criticise logistical issues and that its use reduced in-class engagement and interaction. Overall, the technology was a hindrance, possible reasons are explored with findings that are essential for other educators who are considering using such technologies.

#### **ST4.4b: A new academic-branded blog to enhance the curriculum, innovate pedagogy and engage the society**

Dr Stefano Sandrone, Imperial College London  
Oral presentation (20 minutes), Room 226, 16:00-17:00

Communicating science to engage the public and inspire the society is an important action for scientists, and, more generally, citizens around the globe. However, not many educational platforms or training activities in line with this aim are routinely integrated within MSc curricula. The key object of this session is to discuss pivotal insights following the design and the successful implementation of a novel, academic-branded, MSc students-led blog to enhance the curriculum, innovate pedagogy and engage the society.

#### **ST4.4c: Peer instruction: Why, what and how?**

Dr Patrick Thomson, University of Strathclyde  
Oral presentation (20 minutes), Room 226, 16:00-17:00

Peer instruction is a well-established educational technique that challenges students with conceptual tests, which are solved alone and then debated in groups. It is quick and effective, and can dramatically enhance student understanding and knowledge retention when used as part of a traditional lecture. Students gain the same benefits as an interactive tutorial, but peer instruction scales to large numbers of students. This session will explore some of the background of this initiative, but focus on the “how-to” aspect, covering strategies, tools and pitfalls. You will have an opportunity to take part in a peer instruction instance, so please bring an internet-enabled smartphone or other device with you to the session.

#### **ST4.5a: Improving student engagement with marking criteria and feedback (in large classes)**

Dr Natasha Barrett, University of Reading  
Oral presentation (20 minutes), Room 227, 16:00-17:00

Whilst many institutions are driving improvements in provision of clearer marking criteria and timely feedback, this is challenging in large undergraduate classes. Therefore we attempted to develop a novel lab report assessment that drives students to engage with marking criteria and feedback, yet is feasible with large cohorts. Initial data from our trial indicates that our students struggled to understand marking criteria, did not enjoy the extra time/effort required, and have different expectations to staff. Our improved version (Spring 2019)

addresses many of the student concerns; aiming to enhance both student satisfaction and engagement, whilst striving to streamline staff marking.

### **ST4.5b: Using problem-based learning for a Pharmaceutical Chemistry practical course: The power of the virtual client**

Professor Katja Strohsfeldt, University of Reading

Oral presentation (20 minutes), Room 227, 16:00-17:00

Problem-based learning (PBL) was initially developed in medical schools as a format for self-directed learning and to acquire problem-solving skills. The aim of this paper is to report on the design of a novel pharmaceutical chemistry-based practical class that uses PBL creatively based on the “the power of the virtual client”. The objectives of the session are to: introduce a new and creative approach to PBL used in a medicinal chemistry practical class for pharmacy students; develop a design that addresses typical issues found in PBL approaches, such as high staffing needs and the time-consuming aspect of feedback; and learn tips and tricks on how to implement this pedagogic approach into large classes.

### **ST4.5c: Practice-based Engineering assessments that promote originality, problem solving and timely delivery of feedback**

Dr Mike Knowles, University of Sunderland

Oral presentation (20 minutes), Room 227, 16:00-17:00

This session will outline an innovative approach to assessing practical activities as part of a second year undergraduate Industrial Automation module. The approach taken places an emphasis on students applying the principles of design by making it an essential part of the process for the practical activity, avoiding the frequent issue that students ‘reverse engineer’ preparatory activities. The approach also means that the assessment is performed under more realistic, authentic conditions, that there are regular opportunities for formative feedback, and because the practical work occurs under controlled conditions there is confidence that the students have done the work themselves.