

## eSTeEM Projects Summaries: Oct 23–Mar 24

**Title:** [Encouraging verbal communication in online small-group Maths problem-solving sessions; taking inspiration from individual sessions](#)

**Project team:** Abi Kirk

**Keywords:** Online tutorials, interaction, verbal communication, problem-solving

**Description:** By considering what encouraged students to talk in Individual support sessions, a series of successful sessions were developed which encouraged students to work on mathematical problems in small groups by trialling 3 different types of interaction.

**Reviewed by:** SP

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**Title:** [Black student experience and attainment on S112: improving a level 1 STEM module](#)

**Project team:** Louise MacBrayne, Jennie Bellamy, Angela Richards and Elaine McPherson

**Keywords:** Attainment gap, Black, Asian and Minority Ethnic, exam, online tuition

**Description:** This project explores the experiences of Black students on a Stage 1 science module and examines awarding gap data. Students reported lack of representation in our curriculum and teaching and a sense that they often felt to be 'the only Black student' in many situations. In addition to making recommendations to address these issues, the project also revealed that assumptions about access to additional resources (to conduct practical work at home) are not always justified and can cause barriers to student engagement.

**Reviewed by:** MHJ

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**Title:** [Understanding the impact of COVID-19 on ethnic minority students' study experience and awarding gap \(A case study of Level 1 C&C Open University Modules\)](#)

**Project team:** Dhouha Kbaier, Soraya Kouadri Mostéfaoui and Annemarie Kane

**Keywords:** Awarding Gap, COVID-19, Ethnic Minority Students, Higher Education, Study Experience

**Description:** By reviewing a mix of quantitative and qualitative data this project highlights the manifold challenges and disadvantages faced by ethnic minority students during the COVID-19 pandemic. It gives several recommendations on how these challenges can be addressed.

**Reviewed by:** SP

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**Title:** [Learning Logs in SXPS288 – Employability skills for remote experiments](#)

**Project team:** Alan Cayless, Arabella Nock, Stella Bradbury and Mark McJury

**Keywords:** Learning Logs, Skills Development, Employability, SXPS288, Remote Experiments

**Description:** This study aimed to assess the level of student engagement with the Learning Logs in the context of SXPS288, to identify potential changes to increase participation and make the Logs/their associated exercises meaningful and relevant to all students. SXPS288 is a mainstream experimental module at L2 on the physical sciences pathways. VLE and PowerBI analytics were used to quantify student interaction and student surveys were used to obtain both targeted and untargeted feedback. The findings showed that whilst the majority of students engaged with the Learning Logs, the frequency of the engagement was fallen short of expectation. However, students would find more guidance on the purpose and functionality of the Learning Logs beneficial and would potentially appreciate tighter integration between the personal development tools and more consistency of their uses across modules.

**Reviewed by:** DC

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**Title:** [Measuring the Impact of the Learning Design and Course Creation Workshops](#)

**Project team:** Tom Olney, Mark Endean, Duncan Banks, Daphne Chang, Lin Lin, Bart Rienties

**Keywords:** Learning Design, Course creation, professional development, China

**Description:** Via Learning Design and Course Creation (LDCC) Workshops, the authors trained around 1000 participants from 9 separate OU/HEI in China and Belarus. Evidence gathered at varying periods after the professional development took place indicated that many of the participants and OU/HEI adopted the approaches shown to them, and the identity of the academics was positively affected as a consequence. The project has now evolved into Open Societal

Challenge 187, which will produce an impact case study that draws on detailed evidence from one of the OU.

**Reviewed by:** SP

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**Title:** [Which factors are correlated with undergraduate engineering distance learning students' expectations of ethical issues?](#)

**Project team:** Jo Sessford

**Keywords:** Engineering ethics, Behavioural ethics

**Description:** Evidence from students on engineering modules suggest that they still struggle to recognise ethical issues and that further integration into the modules and assessments is required. Particularly when considering educational issues, such as plagiarism, which many students do not consider an ethical issue. Feedback from students also suggests that staff members could benefit from further ethics training.

**Reviewed by:** SP

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**Title:** [Improving and evaluating inclusivity in group project work for distance-learning engineering students](#)

**Project team:** Alice Moncaster, Hedieh Jazaeri, Fiona Gleed, Silvia Varagnolo and Jo Smedley

**Keywords:** Groupwork, teamwork, engineering, inclusion, distance learning

**Description:** Projects and teamwork are the predominant context in which most engineers work. Providing supported learning experience of such contexts supports employability for our students. However, group projects are particularly problematic within the OU setting. Our scholarship project is about improving inclusivity for distance-learning group projects. The specific context is T229, a Stage 2 specialist engineering module which includes a distance group project. The analysed data from the literature, surveys and interviews were triangulated to develop guidelines for the design and delivery of inclusive distance-learning group projects.

**Reviewed by:** DC

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**Title:** [Automated feedback on object-oriented code: impact and demographic analysis](#)

**Project team:** Anton Dil, Sharon Dawes, Richard Walker, Matthew Nelson and Lindsey Court

**Keywords:** Assessment, automated feedback, demographics, engagement, programming

**Description:** Students who made use of automated feedback in the CodeRunner environment before TMA submission showed increased confidence, had higher scores and were more likely to complete the module.

**Reviewed by:** SP

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**Title:** [Does the provision of an 'own working space' for tutors enhance the learning experience for students \(when implementing an extensive module level tutorial timetable\)?](#)

**Project team:** Hayley Ryder and Tacey O'Neil

**Keywords:** Adobe Connect, visible rooms, individual rooms, cluster tuition, module tuition, technology acceptance, extended and enhanced timetable, change acceptance, tutor well-being, graduated difficulty levels, self-selection, tutor specialism, student self-selection

**Description:** This study employs Roger's Diffusion of Innovation and Davis's Technology Acceptance Model to analyse the adaption of the Group Tuition Policy by M303 tutors and explains how the use of individual, personal rooms (GTP-own) may mitigate the potential negative impact on tutor well-being of changes in tuition strategy. The project team surveyed tutors on M303 and analysed student engagement with tutorials across two presentations. The results show that implementing the GTP with GTP-own had a greater relative advantage over the previous system than implementing the GTP with shared rooms, increased the compatibility with existing values, was less complex and more trailable than GTP implemented with shared rooms. Such an intervention also appeared to raise student satisfaction and increase tutorial engagement.

**Reviewed by:** DC

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