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<tbody>
<tr>
<td>1</td>
<td>17K-LA-SPS-01</td>
<td>Laura Alexander</td>
<td>An investigation into how STEM students use learning resources in different formats, and how this use develops over time</td>
<td>Supporting students</td>
<td>Online, onscreen, modules, digital, learning resources, interaction, study, student engagement, print materials, retention</td>
<td>S217, MST224, M250</td>
<td>SPS</td>
<td>Alexis Landbury (SPS)</td>
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<td>Nov-17</td>
<td>Jan-19</td>
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<td>2</td>
<td>17E-JB-LHCS-01</td>
<td>John Baxter</td>
<td>Evaluation of onscreen note-taking tools</td>
<td>Supporting students</td>
<td>Online/onscreen STEM practice</td>
<td>L201</td>
<td>LHCS</td>
<td>Diane Butler (LHCS), Victoria Peacock (SPS), Eleanor Crabbe (LHCS) and Katherine Lums (LHCS)</td>
<td>May-17</td>
<td>Dec-18</td>
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<td>3</td>
<td>17J-SS-SPS-01</td>
<td>Simon Bell</td>
<td>Wisdom from Groups</td>
<td>Supporting students</td>
<td>Group work, graphic, novel, animation, retention, student engagement</td>
<td>T219, T319</td>
<td>SPS</td>
<td>Alexis Lansbury (SPS)</td>
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<td>4</td>
<td>18F-JBSJ-EI-01</td>
<td>James Bowen and Stephen Jones</td>
<td>Specimen Exam Papers: Do students benefit, and if so, how?</td>
<td>Supporting students</td>
<td>Specimen, exam, paper, end-of-module assessment, tutor, feedback</td>
<td>T271, T272</td>
<td>E&amp;I</td>
<td>Anne-Marie Gallen (E&amp;I)</td>
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<td>18A-KBMN-EICC-01</td>
<td>Kay Bromley and Matthew Nelson</td>
<td>Evaluating the impact of postgraduate study in Project Management on students' professional practice in the workplace and assessing the benefits of professional body accreditation</td>
<td>Employability</td>
<td>Employability, Professional practice, work-based learning, professional development</td>
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<td>E&amp;I &amp; C&amp;C</td>
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<td>18F-SB-EI-01</td>
<td>Stephen Burnley</td>
<td>Investigating the challenges faced by postgraduate students in developing countries</td>
<td>International curriculum delivery</td>
<td>Commonwealth Scholarship Commission, postgraduate, developing countries, Environmental Management MSc programme</td>
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<td>E&amp;I</td>
<td>Sinead O’Connor and Richard Campen (AL)</td>
<td>Jan-18</td>
<td>Sep-19</td>
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<td>18E-ACMJAMG-ASSPSEI-01</td>
<td>Anne Campbell, Mark Jones and Anne-Marie Gallen</td>
<td>Perceptions, Expectations and Experience of Group Tuition: towards a shared understanding amongst stakeholders (part II: the student perspective)</td>
<td>Supporting students</td>
<td>Tuition, group tuition, tuition policy, GTP, teaching model, student attitudes, student perceptions</td>
<td>T121, T320, T325, TM125</td>
<td>Academic Services, SPS and E&amp;I</td>
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<td>18F-CC-CC-02</td>
<td>Sophie Chang</td>
<td>Project Study of the Impact of ICTs in Technology related Subjects on students’ employability</td>
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<td>Employability, postgraduate, professional development, student perception, technology</td>
<td>1B47, 1B50</td>
<td>C&amp;C</td>
<td>Jinhui Wang (AL)</td>
<td>May-16</td>
<td>Oct-18</td>
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<td>9</td>
<td>18E-FE-CC-02</td>
<td>Frances Chestntrid</td>
<td>Oranges, but then lemon to bitter group work?</td>
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<td>Tuition strategy, cluster tutorials, Group Tuition Policy, GTP, online, Adobe Connect, face-to-face</td>
<td>BM111</td>
<td>C&amp;C</td>
<td>Christine Gantner (C&amp;C) and Helen Jeffery (AL)</td>
<td>Jun-18</td>
<td>Oct-19</td>
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<td>18F-ECNKB-LHCSSD-01</td>
<td>Eleanor Crabb, Nick Chatterton and Kate Bradshaw</td>
<td>Developing innovative approaches to enhance personalized learning in S315</td>
<td>Technologies for STEM learning, Personalised learning, teaching assets, media, videos, Camtasia, Adobe Connect, online best practice guides</td>
<td>Sep-18</td>
<td>Dec-19</td>
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<td>11</td>
<td>18F-ECRJKB-LHCSSD-01</td>
<td>Eleanor Crabb, Rob Janes and Kate Bradshaw</td>
<td>Blending labcasts and remote/virtual experimentation: students’ perception in practical skill development alternative</td>
<td>Online/onscreen STEM practice, Practical skills, hands-on, laboratory work, chemistry, remote, virtual experimentation, labcasts</td>
<td>Jun-18</td>
<td>Apr-19</td>
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<td>16J-SC-MS-01</td>
<td>Sally Crighton</td>
<td>Leading the way as a hydro nation in Scotland – supporting student transitions within a strategic partnership between Glasgow Clyde College, The Open University in Scotland and Heriot-Watt University</td>
<td>Supporting students, Employability, student transitions, industry, strategic partnerships</td>
<td>May-17</td>
<td>Oct-18</td>
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<td>13</td>
<td>17K-CD-CC-03</td>
<td>Chris Douce</td>
<td>Understanding STEM tutor motivation</td>
<td>Academic professional development, Professional development, tutor engagement, tutor motivation, development community</td>
<td>Nov-16</td>
<td>TBC</td>
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</table>

1. **Eleanor Crabb, Nick Chatterton and Kate Bradshaw**
   - **Title:** Developing innovative approaches to enhance personalized learning in S315
   - **Activities:** Technologies for STEM learning, Personalised learning, teaching assets, media, videos, Camtasia, Adobe Connect, online best practice guides
   - **Start:** Sep-18
   - **End:** Dec-19

2. **Eleanor Crabb, Rob Janes and Kate Bradshaw**
   - **Title:** Blending labcasts and remote/virtual experimentation: students’ perception in practical skill development alternative
   - **Activities:** Online/onscreen STEM practice, Practical skills, hands-on, laboratory work, chemistry, remote, virtual experimentation, labcasts
   - **Start:** Jun-18
   - **End:** Apr-19

3. **Sally Crighton**
   - **Title:** Leading the way as a hydro nation in Scotland – supporting student transitions within a strategic partnership between Glasgow Clyde College, The Open University in Scotland and Heriot-Watt University
   - **Activities:** Supporting students, Employability, student transitions, industry, strategic partnerships
   - **Start:** May-17
   - **End:** Oct-18

4. **Chris Douce**
   - **Title:** Understanding STEM tutor motivation
   - **Activities:** Academic professional development, Professional development, tutor engagement, tutor motivation, development community
   - **Start:** Nov-16
   - **End:** TBC
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<tr>
<td>16E-CE-EI-01</td>
<td>Claudia Eckert</td>
<td>Research and Education in Product Development for 2040</td>
<td>May-18 - Dec-18</td>
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<tr>
<td>17E-ED-MEDC-01</td>
<td>Mark Endean and Daphne Chang</td>
<td>Evaluation of impact of visiting scholarships on the professional practice of scholars from China</td>
<td>Dec-17 - Dec-18</td>
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<tr>
<td>17E-MI-EI-02</td>
<td>Mark Endean</td>
<td>Longitudinal impact of visiting scholarships on the professional practice of scholars from China</td>
<td>Dec-17 - Dec-18</td>
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<tr>
<td>17C-CI-CC-01</td>
<td>Christine Gardner</td>
<td>Analytics for tracking student engagement</td>
<td>Oct-17 - Apr-19</td>
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<tr>
<td>16E-AC-EI-01</td>
<td>Alec Goodyear</td>
<td>Evaluating the impact of a qualification-based approach to student engagement and success in engineering study</td>
<td>May-18 - May-19</td>
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<tr>
<td>16E-HN-CH-01</td>
<td>Vikki Hussey-Hunter and Carol Midgley</td>
<td>What is the role of the online-only module?</td>
<td>Oct-16 - Dec-18</td>
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<td>17E-IR-UHKS-02</td>
<td>Janet Horncastle</td>
<td>Skills progression in practice science within the Life Sciences</td>
<td>May-17 - Sep-18</td>
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<td>16E-SH-SPS-01</td>
<td>Caroline Haswell</td>
<td>Supporting students</td>
<td>Aug-16 - Jul-20</td>
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<td>18E-CH-LTI-01</td>
<td>Christothea Herodotou</td>
<td>Understanding and improving students’ learning experience and engagement with University science on-line: The use of virtual and remote microscopes</td>
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<td>26</td>
<td>17E-RHAB-M&amp;S-01</td>
<td>Rachel Hilliam and Alison Bromley</td>
<td>Supporting the student’s learning journey through the transition of mathematics and statistics from level 2 to level 3</td>
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<td>27</td>
<td>17E-REJEMEFJI-LHCS-LTI-01</td>
<td>Rob Janes, Elaine Moore, Elizabeth FitzGerald and Jo Iacovides</td>
<td>Utilising the Teaching Tricky Topic process to identify and Address Students’ Misunderstandings across Three OU Modules</td>
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<td>28</td>
<td>17J-MJ-SPS-02</td>
<td>Mark Jones</td>
<td>Online Team Investigations in Science (OTIS)</td>
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<td>17J-SKM-CC-03</td>
<td>Soraya Kouadri Mostéfaoui</td>
<td>Supporting Degree Apprenticeship students: Tutors’ and Students’ perspectives</td>
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<td>17K-EI-02</td>
<td>Nicole Lotz</td>
<td>Developing a sense of community through below base engagement between staff and students in creative industry subjects</td>
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<td>17E-HM-LHCS-01</td>
<td>Hilary MacQueen</td>
<td>Factors affecting student success in the workplace</td>
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<td>33</td>
<td>17E-CMSO-EI-01</td>
<td>Carol Morris and Sally Organ</td>
<td>Engineering qualifications at the OU: what motivates women to study?</td>
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<td>17E-SNST-EI-02</td>
<td>Suresh Nesaratnam and Shahram Taherzadeh</td>
<td>Pilot trial of a smartphone app for ascertaining water quality</td>
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<td>35</td>
<td>17K-JO-CC-01</td>
<td>Joseph Osunde</td>
<td>Programming and non-programming modules – an investigation of representation by gender at The Open University</td>
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<td>36</td>
<td>17E-SPCH-MS-01</td>
<td>Sue Pawley and Chris Hughes</td>
<td>Supporting MST224 students with bridging material during their transition from level one mathematics</td>
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<td>17E-OADLAB-LTIKMI-EI-01</td>
<td>Ant Dil</td>
<td>VISION: Visual Interfaces for Systematising and Interpreting Online Notes</td>
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<td>Programming and non-programming modules – an investigation of representation by gender at The Open University</td>
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<td>17E-SPCH-MS-01</td>
<td>Sue Pawley and Chris Hughes</td>
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<td>38 18F-NPSECRJ-LHCS-01</td>
<td>Online remote experiments in chemistry - analysis of delivery, assessment, tracking and student perception</td>
<td>Online, remote access, experiments, real science, student engagement, performance, perception, laboratory</td>
<td>LHCS, S325</td>
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<td>39 18-H-RQ-El-01</td>
<td>Online interactive learning of engineering concepts</td>
<td>Support students</td>
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<td>40 18E-MRNS-CC-01</td>
<td>Summer of code</td>
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<td>41 18E-MRRI-EI-01</td>
<td>Changing the way the game is played: transforming postgraduate curriculum praxis and workplace capabilities</td>
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<td>42 17K-LR-EI-02</td>
<td>Active learning in synchronous online tuition: increasing student interaction</td>
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<td>43 17J-KR-MS-01</td>
<td>Use of STACK to generate formative assessment for level 3 Pure mathematics</td>
<td>Supporting students</td>
<td>MST226, MST227, MST315, MST385</td>
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<td>44 17I-HRTO-MS-01</td>
<td>Use of OULive recordings of `live mathematics’ and discussion forums on a level 3 Pure mathematics module in order to enable students to move to a growth mindset in their studies and to add a social dimension to learning mathematics</td>
<td>Supporting students</td>
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<td>Hayley Ryder and Toby O'Neil</td>
<td>Does the provision of an `own working space’ for tutors enhance the learning experience for students</td>
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<td>16SNS-CC-01</td>
<td>Steven Self and Mark Slaymaker</td>
<td>Refining a framework for measuring qualification effects</td>
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<td>18E-BSRH-LHCSLTI-01</td>
<td>Bryan Singer and Rafa Hidalgo</td>
<td>Improving student engagement during online-only courses through the use of interactive question-embedded videos</td>
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<td>Linda Thomson and Nicola McIntyre</td>
<td>Online tutorial design: can we do better?</td>
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<td>Linda Thomson and Maria Velasco</td>
<td>The impact of live streaming module-wide events on student engagement and motivation</td>
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<td>Esteem Projects List September 2018</td>
<td>Evan Thomas, Saree Kosathri Mostefaoui and Helen Jeffers</td>
<td>Visualising the code: are students engaging with programming at level 1?</td>
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<td>Tom: Using OpenStudio in STEM learning</td>
<td>Elaine Thomas, Soraya Kouadri Mostéfaoui and Helen Jeffers</td>
<td>Technologies for STEM learning</td>
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<td>Alan Thomas</td>
<td>Academic professional development</td>
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<td>Tim Walshe</td>
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<td>Phil Wheeler, Julia Cooke, Kadmiel Maseyk and Trevor Collins</td>
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<td>58</td>
<td>Goals professional development</td>
<td>Carlton Wood and Steve Walker</td>
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<td>Neil Smith, Joseph Osunde, Michel Wermelinger and Sue Truby</td>
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<td>Lisa Bowers</td>
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<td>Jimena Gorfinkiel</td>
<td>Education and Physical Sciences</td>
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<td>14L-PB-SPS-01</td>
<td>Pam Budd/Holly Argles</td>
<td>Physical Sciences</td>
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</table>

External this project has led to the project lead adding an external blog through University of Hertfordshire (UH). It has also been placed on the project blog, which is a useful tool for haptic learning. Papers have been submitted to external academic conferences.
During the course of the project work the C & C School replaced the subject Stage 1 60 credit module, TU100, with two 30 credit modules, TM111 and TM112. The first of these – TM111 – uses OUBuild for programming which is a version of Scratch and very similar to Sense as it is a scratch environment, hence students need to only learn one marker, as opposed to learning to code Scratch and Sense. The second module – TM112 – is based on the Python language and teaches resources for programming, although students need no prior knowledge of Python. The second two findings of this project contribute significant knowledge to the efficacy of running bridging courses for distance learning students. The findings demonstrate that students who are most likely to benefit from attending a bridging course will need to be contacted personally and encouraged to sign up for it and attend. However, the project has demonstrated that OU students, when considering multiple modules across a number of years, is extremely complex. Whilst it is relatively easy to focus on individual students, following multiple cohorts of students across several possible pathways and qualifications results in a spade-work of cross-referencing. Given the current method of an OU and a site data strategy for the OU, this approach should be giving to providing this type of data in a readily accessible and usable format.

The project has focussed on a large number of interactions of student and our analytical datasets in 2016, and has thus been qualified data regarding issues scores of an project is available. The results of these qualitative and quantitative comparisons suggest that there is potential for expanding and rolling out the project across all of our mathematics and statistics modules.
Understanding the challenges

Impact on student learning has been indirect through our increased understanding of the purposes of group tuition. This understanding is
Nick Braithwaite (SPS)
Jul-17
Chris Douce
Models of assessment,
C&C
The biggest impact of this research is to provide a group of tutors a voice. It allows different module teams to learn more about how a group
placed can be summarised by a set of keywords: purpose, importance, dimensions, acknowledgment,
Mark Endean

Exploring global potential for

Oct-15
E&I
Chris Dobbyn
Engagement,
C&C
Oct-16
Transforming retention and
Understanding on-line
Pam Furniss
A key aspect of this project was the need for rapid and frequent feedback to the rest of the Module Team, to allow for ongoing
13K-CD-CC-01
Sarah Chyriwsky (AL) and
E&I
The OpenWASH Modules and Trainers' Handbook are now available in pdf and Word for print in English and are being translated into four
15C-AMGAW-
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EICC-01
Ann Walshe
Anne-Marie Gallen and
Experience of Group Tuition:
Perceptions, Expectations and
students
Marcelenna Appiah‐Kubi (E&I) and
Students everywhere have similar support needs and expectations of tuition. We can apply what we have learned from Open University
The planned next phase is to extend the benefits of OpenWASH to a wider audience in other
The project was inspired initially by a combination of personal experience from working as a volunteer for the on đồng module evaluation
Methodology, gathering key themes from a number of interviews with OU and STEM tutors to conduct a day long workshop on the importance
Involving ALs in Module
Structured Process for
Understanding STEM tutor
challenges, students' online interactions

We are gradually influencing module content and tuition strategies. We expect that
The inclusion of a discussion around the role of tuition in several level 1 modules has also raised this idea in the minds of learners. It is clear
the outputs of this project and invite a wide range of staff from all faculties to reflect and share their own thoughts on the purposes of
delivering group tuition through staff tutor discussions and staff development. Online staff development materials for ALs draw directly on
The project is contributing to student success through increased enthusiasm that has been passed on to our STEM ALs and other ALs in other
discussions with students to identify and problem solving and troubleshooting for the use of different tools. To offer help to our students, tutors have
medical videos. A key recommendation is that videos remain used to show students how to work with code, whilst being clear in the importance of
created videos. A key recommendation is that video resources are used to show students how to work with code, whilst bearing in mind the
importance of addressing accompanying accessibility challenges.

The OpenWASH evaluation and feedback from the authors and wider feedback from those who have been involved with the project
identified in the project literature review and the findings from the two focus groups.
Although some have raised recent issues about the ability of video to help with communication.

The project is contributing to student success through increased enthusiasm that has been passed on to our STEM ALs and other ALs in other
discussions with students to identify and problem solving and troubleshooting for the use of different tools. To offer help to our students, tutors have
medical videos. A key recommendation is that video resources are used to show students how to work with code, whilst bearing in mind the
importance of addressing accompanying accessibility challenges.

The planned next phase is to extend the benefits of OpenWASH to a wider audience in other
The project was inspired initially by a combination of personal experience from working as a volunteer for the on đồng module evaluation
Methodology, gathering key themes from a number of interviews with OU and STEM tutors to conduct a day long workshop on the importance
Involving ALs in Module
Structured Process for
Understanding STEM tutor
challenges, students' online interactions

We are gradually influencing module content and tuition strategies. We expect that
The inclusion of a discussion around the role of tuition in several level 1 modules has also raised this idea in the minds of learners. It is clear
the outputs of this project and invite a wide range of staff from all faculties to reflect and share their own thoughts on the purposes of
delivering group tuition through staff tutor discussions and staff development. Online staff development materials for ALs draw directly on
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<td>Investigating the careers of Rachel Hilliam</td>
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<td>Enabling Mathematics and Science (STEM) returners</td>
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<td>Jean McCoughry (SPS), Emma Street (LTI), Shirley Broadwood (The OU in Deanery)</td>
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The main findings are that the T215 model has potential to provide a flexible and consistent way of assessing a wide range of alternative media elements: is there a generic model? However, the T215 model can be difficult to retrofit and is not easily applicable to process-based assessments.

It was found that few students seriously used diagrams before their study of the modules. That they were either enthusiastic or sceptical about using diagrams but that this too could be blighted by timing and technical issues. In addition, many students disliked the mainly online delivery of examinations. Students however did not feel the need for these facilities, had privacy concerns or preferred to focus on the forum postings. Students also had primary concerns in relation to social network sites, although their concerns were alleviated somewhat after attending several online social networking in 11/2013. These findings will influence the design of the replacement module using what has been learned from the project and after the experience of testing the previous module to help students to understand about writing social networking and how it relates to employment and also to their educational experience.
Overall, we think that the combination of techniques we have developed and applied to identify, extract and analyse data for this project can be seen as contributing to an overall evaluation framework, which could be used not just for this project, but in general for studies of a similar nature. That said, the framework still needs adjusting and evaluating, so that further work is required. In particular, this research will be used to inform the TU100 day school. This is in use by tutors at the day school.

As a result of the analysis of student mistakes in the TMA question on argument mapping, material for a tutorial session was developed for use. Reflection questions in each TMA have been made for the next module presentation.

Students expressed their support for both face-to-face and online asynchronous and synchronous ways of communicating with each other, and most felt that the online sessions were just as effective as the face-to-face meetings. As a result of these investigations, some adjustments to the placement of the quizzes in the Study Calendar and to the structure of the self-assessment activities within each student's rich portfolio: Exploring e-Ambassadors and e-Portfolios: Exploring e-Ambassadors and e-Portfolios for this project.

In terms of feedback from the students, the majority of students agreed that they were able to learn well by reading text on screen. Only a small percentage of students agreed that they needed to read the materials online to understand everything. Only a small percentage of students agreed that they were able to carry out practical science at level 2. Importantly, the apps can be used to track progress and provide feedback on learning. Students were able to see their progress over time and were also able to see how their marks were improving. The apps are a useful tool for students to track their progress and see how they are improving. The apps can be used to track progress and provide feedback on learning. Students were able to see their progress over time and were also able to see how their marks were improving. The apps are a useful tool for students to track their progress and see how they are improving.

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As with the first phase of the eSTEeM project ‘Enhancing systems thinking in practice at the workplace’, the findings of this research will support the development of a future learning environment for graduate and work-based learners.

Emma Rothero

Employability, systems thinking

Emma Rothero

15A-ER-EEES-02

Jitse van Ameijde (LTI), Email

Enhancing Systems Thinking

12B-ER-EEES-01

Ray Ison, Christine

Linda Robson

Flight of the Fritillary phase 2

Flight of the Fritillary

STEM engagement

Martin Reynolds

E&I

Aug-16

STEM engagement

Jun-18

Framing Professional Practice: Employing Dialogue and Systems Thinking

Martin Reynolds

David Gowing, Mike Dodd, Carole Arnold (ALs), Paul Habgood (LHCS), Nigel Shah and Elaine Wedlock Blackmore (E&I), Rupesh Tatarenko (EEES)

14L-LR-EI-01

Engagement, schools, universities

EEES

Engagement, schools, universities

17C-MR-EI-02

Completed projects

eSTEeM Projects List September 2018

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MST and science modules for selected level 1 students for selected level 1 communications sent to students for selected level 1 investigations into Competencies for Systems Thinking in Practice at the Workplace

Supporting students

Floodplain Meadows citizen science, data collection, partnerships

Partnership, citizen science, student experience, graduate, work-based thinking, post work-based learning capabilities

Curriculum praxis and transforming postgraduate in Practice at the Workplace

Joint PI - Changing the way we teach, learn and research

This project will be listed in the REF21 submission as part of an Impact Case Study around engaging the wider public in research.

Wiltshire. wide external profile, engaging with many organisations outside the University and with slots on Countryfile, BBC Farming Today and BBC News. We communicated the data generated from the project through media and information about a rare plant found on internationally important sites for nature conservation and more in-depth volunteer research is assessed through questionnaires and interviews. Evidence arising from the project has led to new ecological recommendations for the conservation of the plant. This project was listed in the REF submission as engaging the wider public in research where it informed students about the importance of understanding climate change, conservation and the role of citizen science in research. Our data is used in S396 to allow students to develop analytical skills of exploring data and making decisions. Recommendation 4: Although participants were asked if there was any information missing from the communications they received from the university, despite the majority of them checking spam filters giving a high level of confidence that messages are being received, many students reported that they filter the messages themselves, which may account for the perception of not receiving fewer messages.

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2014: Peer assessment in M&S - Elaine Thomas

2015: Using OpenStudio in STEM - Claire Kotecki

2016: Cultural, political and social aspects of disability, sonification, and implications of blending technologies - Helen Jefferis

2017: Peer assessment - Karen Kear

2018: Technological innovations for STEM learning - Chris Nieland

Innovative assessment

- Capstone, work placement, work placement assessment, TYASC, VLE

- Formative assessment, VLE, STACK, TMA

- Self-assessment, self-assessment, formative assessment, VLE

- Student experience, student experience, blended learning experience, blended learning experience, blended learning experience

- Moodle, VLE, TMA, T320, T180

- OpenLearn, TU100, T320, T180

- Peers, PIRATE, SenseBoard, workshop, blended learning, blended learning, blended learning, blended learning

Technological, social and cultural aspects of accessibility, participation, creative processes, community of practice, community of practice

- OpenLearn, MOODLE, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, OU, O
## Completed projects

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| 60 | 11D-MW-CC-01 | iChart – Interactive Exploration of Data Charts | Michel Wermelinger | Developed an interactive, visualisation tool for data charts, iScatter, scatterplot, maps, 

**Technologies for STEM learning:**

- Interactive, visualisation tools
- Data charts, iScatter, scatterplot, maps

**Key PIs:**

- Paul Piwek (C&C)

**Duration:**

- Apr-11 to Jul-13

- There will be follow-up actions in preparing the final version to the OpenScience Lab and module teams.

| 61 | 13L-JW-CC-01 | An investigation into the use of Artificial Neural Networks to predict student failure, and the efficacy of sustainable additional support for those students | John Woodthorpe | Studied the use of Artificial Neural Networks to predict student failure, and the efficacy of sustainable additional support for those students.

**Technologies for STEM learning:**

- Neural networks, predictive modelling, OU Analyse, tutor contact, retention, progression

**Key PIs:**

- Chris Dobbyn, Frances Chetwynd (C&C) and Helen Jefferis (AL)

**Duration:**

- Dec-13 to Mar-16

- Interest in this project from within the STEM Faculty and elsewhere in the University has been driven by the potential improvements in student retention and course plans. That interest has been split between the neural network aspect and the role of the tutor contact part of the project. The project has been very timely, serving as an important result of the current interest and has been a pathfinder for aspects of improving retention and support. Now the project has finished, the work has been taken up by the STEM Faculty, who are funding its continuation on the remaining presentations of TU100. This support includes determining the feasibility of training others to use neural networks on TU100 and on other modules.

| 62 | 13L-JWJD-CCWELS-01 | How students use language relates to learning, retention, and performance in assessment on TU100: Implications for learning design, assessment strategy, and tuition practices in the MCT faculty | John Woodthorpe and Jim Donohue | Examined how students' use of language relates to learning, retention, and performance in assessment on TU100.

**Technologies for STEM learning:**

- Innovative assessment

**Key PIs:**

- Nel Boswood, Caroline Coffin, Qian Kan, Sarah Mukherjee (WELS), Val Hancock, Mandy Honeyman, Cheryl McAndrew, Heather Morris (ALs)

**Duration:**

- Dec-13 to May-16

- Improvement in retention (in as far as the impact of changes implemented can be traced amidst multiple variables affecting student and tutor performance)

- Professional development for the 4-6 MCT ALs involved, and for the MCT and language central academics

- Development of repertoires of practice and a repository of products which will underpin MCTs retention and assessment strategies

| 63 | 14K-JWJD-SMELF-01 | How students use language relates to learning, retention, and performance in assessment on TU100: Implications for learning design, assessment strategy, and tuition practices in the MCT faculty | John Woodthorpe | Conducted research on how students' use of language relates to learning, retention, and performance in assessment on TU100.

**Technologies for STEM learning:**

- Innovative assessment

**Key PIs:**

- Nel Boswood, Caroline Coffin, Qian Kan, Sarah Mukherjee (WELS), Val Hancock, Mandy Honeyman, Cheryl McAndrew, Heather Morris (ALs)

**Duration:**

- Dec-14 to May-16

- Improvement in retention (in as far as the impact of changes implemented can be traced amidst multiple variables affecting student and tutor performance)

- Professional development for the 4-6 MCT ALs involved, and for the MCT and language central academics

- Development of repertoires of practice and a repository of products which will underpin MCTs retention and assessment strategies