

# Teaching and Learning Enhancement Projects (TLEP) Application Form 2022

CQSD use - reference number : **16/2022**

Please refer to the [TLEP scheme criteria and guidance](#) when completing your application.

Please save as a PDF file and submit your application to Martin Wise: [m.wise@reading.ac.uk](mailto:m.wise@reading.ac.uk)

## Applicant's details

Names:	Hong Yang Nasreen Majid Jo Anna Reed Johnson Richard Nunes
Roles:	HY: Programme Director of Reading-NUIST Human and Physical Geography; Examination Officer of Reading-NUIST Environmental Engineering; Departmental International Tutor NM: Lead of Climate and Sustainability Education; School Director of Recruitment and Admissions JJ: Lead of Climate and Sustainability Education; Leading the Subject Knowledge Enhancement Programme; Committee Member Health, Safety and Wellbeing RN: Programme Director of BSc Real Estate with Dip/MSc Urban Planning and Development; Equity, Diversity and Inclusion Lead
School / Services:	HY: School of Archaeology, Geography and Environmental Science (SAGES) NM and JJ: Institute of Education (IoE) RN: Henley Business School (HBS)
Department / Unit:	
Emails:	HY: <a href="mailto:h.yang4@reading.ac.uk">h.yang4@reading.ac.uk</a> NM: <a href="mailto:n.majid@reading.ac.uk">n.majid@reading.ac.uk</a> JJ: <a href="mailto:j.a.reedjohnson@reading.ac.uk">j.a.reedjohnson@reading.ac.uk</a> RN: <a href="mailto:r.j.nunes@reading.ac.uk">r.j.nunes@reading.ac.uk</a>

<b>Project Title:</b>	<b>University campuses as living labs for Education for Sustainable Development</b>
<b>Project Start Date:</b>	01/08/2022
<b>Project End Date:</b>	31/07/2023

## Project Outline and Rationale (Maximum 500 words)

### AIMS

The main aims of this project are to (1) **green six curricula** through learning about carbon dioxide emissions in three schools; (2) use our campuses as **living labs** for **Education for Sustainable Development**; (3) **co-design** solutions between students and staff to tackle sustainable development challenges on campuses and beyond.

### OUTLINE

Typically, sustainable development, particularly environmental sustainability, is taught in Geography and Environmental Science disciplines. However, Education for Sustainable Development (ESD) has increasingly been recognised as the business of all subjects. In every discipline, there is an opportunity to contribute to understanding environmental sustainability and its future importance. A recent survey by Students Organising for Sustainability (SOS) UK indicates that **84%** of students would like to see sustainable development actively incorporated and promoted across all courses.

Our campuses are unique **living labs** for ESD, including Whiteknights, London Road, and Greenlands, which are excellent combinations of natural and artificial landscapes, with a distinctive large lake/river, woodland, conservation meadows and diverse architecture. As a pilot project to **green curriculum**, sustainable development will be embedded in the following six modules in the three schools:

- **GV1DEN** - Data Environment (School of Archaeology, Geography and Environmental Science)
- **GV2RTS** - Research training for Geography and Environmental Science (SAGES)
- **EDM007** - Investigating Education (Institute of Education)
- **EDM147** - Leading and Managing Educational Change (IoE)
- **RE3SUD** - Sustainability and Urban Design (Henley Business School)
- **REMP16** - Urban Design and Sustainability (HBS)

An introductory lecture will be provided on Carbon Dioxide and Sustainable Development. Students on the different campuses will use the portable Airthings metres to measure the Carbon Dioxide (CO<sub>2</sub>, one of the most important greenhouse gases that cause anthropogenic climate change) at different natural and artificial sites to monitor/understand the factors driving the emissions at the different case study sites (extracurricular activities). Based on the group-collected Carbon Dioxide data (Team-based Learning), students will deliver a group presentation about Carbon Dioxide emissions at each campus and mitigation plans for sustainable development. Formative assessment and feedback will be provided by instructors.

Interviews and questionnaire will be conducted to understand students' learning experiences. The feedback will be used to improve the ESD in these three schools and others.

### IMPACT

ESD will support students (and staff) to develop knowledge, competence and ability, and co-design solutions that drive changes toward sustainability.

Carbon Dioxide metres will have a positive impact on our NSS scores for 'Learning Resources'.

### EVALUATION & DISSEMINATION

The project will be evaluated through interviews and a survey of students.

The results will be disseminated through the T&L exchange and a presentation at a University T&L event. The PIs and students will also present the outcomes at Advance HE Sustainability Symposium.

### ALIGN WITH UNIVERSITY T&L STRATEGY

This project aligns with the University Strategic Plan 2020-206, particularly "Sustainability (Including environmental sustainability)".

### CONTINUATION OF PROJECT

The project will be repeated in future to green the curriculum further, offering ESD for more students in various schools. Carbon Dioxide metres will be re-used, and we will seek additional funds for more Carbon Dioxide metres.

### Full Budget Details (breakdown of total proposed expenditure)

Activity/item (Including activity start and end dates)	Costs
Purchase 9 portable Carbon Dioxide (CO <sub>2</sub> ) metres; 3 for SAGES, 3 for IoE, 3 for HBS (01/8/2022-30/09/2022).	£1,791 (199×9)
Micro-level modification of curriculum of six modules (GV1DEN, GV2RTS, EDM007, EDM147, RE3SUD, REMP16), including extracurricular activities and learning of Carbon Dioxide emissions, and formative assessment (01/08/2022-30/10/2022).	
Students measure Carbon Dioxide emissions on various natural and artificial sites and different activities and deliver group presentations (01/11/2022-28/02/2023).	
Formative assessment of students' group presentations (01/03/2023-24/03/2023).	
Design questionnaires and conduct surveys to understand students' learning experiences and feedback on the learning of Carbon Dioxide (17/04/2023-30/05/2023). Focus group to understand students' learning experience and feedback, 15 students (5 students from each school) will be paid through Campus Job.	£245
Write project report. The results will be disseminated through the T&L exchange and a presentation at University T&L event and Advance HE Sustainable Symposium 2023. Registration fee for Advance HE Sustainability Symposium 2023.	£175
<b>Total expected expenditure</b>	<b>£ 2,211</b>

### Previous Funding

<p><b>Have you previously received TLDF project funding? If Yes, please provide details including year of award:</b></p>	<p>HY has been awarded two TLDP funds (2020 and 2021)</p> <p>Thanks to the generous funding, HY has published the project findings in</p> <ol style="list-style-type: none"> <li>1) Educate for the future: PBL, Sustainability and Digitalisation 2021, UNESCO, Aalborg University (Scopus index)</li> <li>2) European Society for Engineering Education (SEFI) 49<sup>th</sup> Annual Conference Proceedings 2021 (Scopus index)</li> <li>3) UoR Promoting Racial Justice in Teaching and Learning.</li> </ol>
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**Head of School / Service** (Please answer all questions and delete as applicable)

<b>Is your Head of School/Service aware of this application?</b>	<b>Yes /<del>No</del></b>
<b>Is your Head of School/Service supportive of this application?</b>	<b>Yes /<del>No</del></b>

**I have read the TLEP guidance and scheme criteria. I understand and accept the terms and conditions of funding.** (Please tick box)