

Title of case study

Greening the Campus- Implementing change through interdisciplinary 'real-world' projects

Staff Lead

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School/ Department

School of Environmental Sciences

Faculty

Science and Engineering

Name of course and module (if applicable) case study took place within

ENVS218 Introduction to environmental sustainability

Please briefly describe the activity undertaken for the case study

This case illustrates an example of using 'real-world' student projects in a module to deliver improved outcomes related to environmental sustainability on campus. Here the module leader has created a learning design that is scalable to a relatively large cohort, develops a wide range of employability skills, is inclusive for an intercultural group, develops an effective model for assigning student groups, and created an authentic assessment that most students found to be engaging and motivational.

The module is undertaken by second year undergraduates in Environmental Science, Planning, Architecture, Geography and Marine Biology. Approximately 180 students take the module which is conducted in an interdisciplinary group. The cohort of students taking the module is typically composed of approximately 60% Chinese students (mainly XJTLU students), 20% other international students, and 20% UK students.

Students are tasked, within intercultural and interdisciplinary groups, to develop innovative design solutions for 'greening' the University campus using a variety of themes such as biodiversity and sustainable urban drainage. The brief was developed by professional services staff in Facilities Residential and Commercial Services (FRCS) with the intention of supporting ideas that could be incorporated into the University's estate strategy.

Students are challenged to 'pool' their disciplinary expertise within their group to develop a coherent, complete proposal that helps the client (in this case FRCS staff) understand the concepts and considerations involved in delivering the brief to enable a societal transition to environmental sustainability.

Taught content to support the student projects covers the dimensions of environmental sustainability (e.g. water, energy and biodiversity) and the relationship to environmentally sustainable development from a planning perspective.

Following development of the project proposals students are assessed on a presentation of their design proposals to the client (Professional Services staff from FRCS) through a poster event in the Guild of students.

In addition to this module, students on other programmes in the School of Life Sciences and the Management School engage in parallel assessed projects focusing on different aspects of the main greening the campus project task.

How was the activity implemented?

- Students are briefed on the task at the start of the module and asked to select a group of four friends that they want to work with. The module leader then combines two groups together mixing different cultural and disciplinary groups.
- Lecture content specifically addresses the need to work together to understand intercultural perspectives and how to go about developing these skills.
- Workshops are held to facilitate group discussions using Ketso, a tactile felt shape toolkit used to structure workshops that enable everyone's ideas to be captured. Within these workshops, students are encouraged to explore and discuss openly the benefits and challenges to understanding and valuing intercultural and interdisciplinary perspectives.
- Within the student project groups, icebreakers and minute taking tips are used to support group development and peer review is used to provide feedback on the proposals as they start to take shape.

Has this activity improved programme provision and student experience, if so how?

Evaluation from previous student cohorts indicates that most students found the incorporation of a 'real-world' project into their studies engaging and motivating, and the intercultural, interdisciplinary nature of the groups also helped students to appreciate other perspectives and make new friends.

Students were also able to recognise that they had developed and enhanced a range of employability skills that included: group work, working to a brief, presenting to a client, visual representation of design solutions, creative thinking and problem solving, and working in an interdisciplinary team focused on a complex problem and research skills.

Did you experience any challenges in implementation, if so how did you overcome these?

Assumptions can be made that international students are fully aware of the assessment style requirements of their new culture. This is not always true and therefore it is important

to outline expectations clearly at the start of the project. Following initial feedback, we have provided anonymised previous student reports on VITAL to clarify the assessment criteria.

Which Liverpool University Hallmarks and Attributes does this case study relate to (tick all boxes that apply)

Research-connected Teaching	X
Active Learning	X
Authentic Assessment	X
Confidence	X
Digital Fluency	X
Global Citizenship	X

How does this case study relate to the Hallmarks and Attributes you have selected?

Research-connected Teaching

Students develop their own research skills through development of the project proposal, and research informed teaching is provided in the taught sessions supporting the module.

Active Learning

Students are engaged in 'real world' projects where they are expected to do their own research and develop a design proposal.

Authentic Assessment

By involving clients with a 'real world' project brief and involving them in the assessment of the project proposals, students are engaged in authentic assessment. They produce a tangible outcome (the poster) that can be used to show employers and they receive feedback from industry professionals.

Confidence

Students develop their confidence to work with different disciplinary and cultural groups as a result of the composition of the project team and to present their ideas in a confident, fluent manner to a professional audience through the poster presentation.

Digital Fluency

Students must make a poster using appropriate software to ensure their work is showcased in a professional manner. They also develop their digital information literacy skills through researching different approaches to delivering the brief.

Global Citizenship

Students develop strong global citizenship skills working with intercultural groups, on an environmentally sustainable initiative.

How could this case study be transferred to other disciplines?

If a subject-appropriate 'real-world' project and willing client can be found, this learning approach can be adapted to a wide range of contexts. The formation of intercultural and interdisciplinary groups can similarly be adapted across different subject areas.

The alignment of students in other programmes focusing their discipline expertise on the same 'real-world' project in parallel, and sharing their findings to non-technical audiences, provides a wide range of opportunities for students to develop interdisciplinary and employability skills and confidence.

If someone else were to implement the activity within your case study what advice would you give them?

- You need a good working relationship with a client to formulate a brief that works both as an academic assessment, and creates a useful output for the client.
- You need to 'level the playing field' by running explicit intercultural working workshops to allow international students to make an immediate connection with the material so they can focus on the actual assessment, and help home students to understand the implications and benefits of working in intercultural groups.
- If you have international students, form a strong partnership with the English Language Centre so they can provide appropriate support for non-native English speakers as they engage with this type of assessment.
- Seek advice from staff within the Careers and Employability Service if you are planning to work with external clients for the first time.



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