

THE CAPSTONE PROJECT: EVIDENCE-
INFORMED RE-IMAGINING OF FINAL
YEAR PROJECTS TO BETTER PREPARE
STUDENTS FOR THE 21ST CENTURY
WORKPLACE

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Project Snapshot

January 2025



UNIVERSITY OF LEEDS

Project Overview

University of Leeds belongs to an elite group of HEI's globally that require all undergraduates to undertake a major research assignment¹. As a research-intensive university, the purpose of our final year projects (FYP) is to provide a research experience. However, few students go onto careers in research, significant numbers will leave their discipline altogether⁷.

Radical change is required. We need to re-think the purpose, practices, and outcomes of the Leeds Curriculum FYP to better prepare the majority of our graduates, through their final year project, for the diversity of careers they go into².

The solution is to introduce portfolios of capstone projects, a combination of UK research/enquiry-based projects with the US Capstone experience, with its focus on personal and professional development, into programmes^{4,6,8,11}. We would retain traditional research projects for those students going into research careers or careers where research experience/skills would be beneficial, whilst also introducing workplace and social justice capstone projects for students going onto careers outside of research^{8,11}.

By providing an inclusive portfolio of capstone project opportunities, it will enable every learner to realise and showcase their full academic potential, goals, and ambitions. It will put Leeds at the forefront of educational innovation and change globally.

Project Objectives

- Undertake scoping reviews of good practice in undergraduate and taught postgraduate research project and capstone experience provision globally.
- Showcase the potential of capstone projects to all Stakeholders, and support educators across the University to progressively implement them into their programmes.
- Undertake research to determine whether capstones are inclusive, equitable, transformative (massive uplift in competencies) and transitional (work-place ready)

Methods

A scoping review of the literature for project-based capstone opportunities globally and across all disciplines was initiated. Its purpose to gather good practice/exemplars for implementation into programmes across the University.

A capstone How Might we guide was created and shared. Three workshops on capstone projects for created for colleagues. Bespoke workshops and seminars were then provided for colleagues and Schools seeking further information and/or support to implement capstone projects into their programmes. Guidance, exemplars, assessment rubrics and other resources were shared on request.



I collaborated with other Curriculum Redefined Academic Leads to promote capstone projects across the University.

Research was initiated to evaluate the impact of capstone projects on all stakeholders, and to identify the challenges (and potential solutions) educators and Schools faced in implementing them into programmes.

Key findings

- Capstone projects are equitable, inclusive, promote learning gain, enable learners to realise their goals and ambitions, prepare them for the workplace, and enable them to showcase their experience and competencies to all stakeholders.
- Whilst there are educators and Schools across the University that have enthusiastically adopted and implemented capstones into their programmes, there is still significant work to be undertaken in changing mindsets and processes to support implementation more broadly across the University.
- There is a huge, largely untapped potential, for educators to co-create capstone opportunities across the University, and with external stakeholders, locally, nationally, and internationally.
- Educators, Institutions and Accrediting Bodies globally, particularly in the Biosciences, are increasingly recognising the transformative and translational potential of capstone projects and are introducing portfolios of opportunities into programmes.

Implications for practice

- Capstone projects are transformative, support learners in their transition into workplace, and in becoming changemakers.
- Educators need to offer portfolios of capstone opportunities, tailored to provide the workplace experiences, and develop the competencies required by their graduates in the workplace.
- Portfolios of capstone opportunities will not, by themselves fully realise the transformative and translational potential of capstone projects, educators must also change the organisational processes and assessments to better reflect the workplace.
- Capstone projects are not a standalone educational intervention, instead they are a vehicle to embed other student education strategic objectives into programmes, for example equity, inclusion, education for sustainable development, cultural awareness and capital.



- Educators should not be afraid to push disciplinary boundaries and practices, but instead, be at the forefront of educational innovation.

Outputs

I was plenary lecturer at two international conferences, and invited speaker, delivering 40 seminars/workshops (7 internationally, 33 nationally/University of Leeds), and gave 15 conference presentations. Copies of these outputs are available on request (d.i.lewis@leeds.ac.uk).

I created a University of Leeds Curriculum Redefined Capstones “[How Might We](#)” guide and written blog posts showcasing the [potential of capstones](#) and urging colleagues to [re-think capstone assessments](#).

I have published a book chapter which includes case studies of Capstones (Lewis DI. (2024). The capstone experience: creating Change-makers. In “[Pedagogies of Biomedical Science: A Holistic Approach to Integrating Pedagogy Across the Curriculum](#)” Johnson D (Ed). Routledge. Chapter 8.

I have academic papers on the learning gain, challenges and solutions faced by educators, and capstone assessments in press.

My work has informed the re-imagining of the [Institute of Biomedical Science](#)’s project accreditation criteria.

Challenges

The University approved the business case for Curriculum Redefined just before this fellowship started. Therefore, the approach and objectives of the Fellowship had to be modified to better align with Curriculum Redefined and its timelines.

Approximately 40 Curriculum Redefined academic leads were appointed, each keen to get started on their specific area of responsibility. Colleagues were overwhelmed with the number of workshops on offer each week, resulting in low attendance at my capstone workshops. In hindsight, it might have been better to delay the capstone ones.

Implementation of an education intervention that is significantly different to established disciplinary practices will always face resistance to change. I progressively developed a comms strategy, which offered solutions to concerns of different stakeholders. However, I should have better considered how to win over hearts and minds at the start.



Next steps

I remain the Curriculum Redefined academic lead for capstone projects. I will continue to support educators across the University, nationally and internationally in the implementation of capstone projects into their programmes. I will seek to develop partnerships with Stakeholders globally to create new capstone opportunities which address their needs and/or support their activities. I have been commissioned to create an open education textbook, applicable to all disciplines.

If you would like to collaborate to develop new capstone opportunities and/or contribute a case study to the upcoming capstones textbook (for which full attribution will be given), join the capstone Community of Practice I have established, or explore the opportunity of me working with you to support the implementation of capstones into your programmes (including delivery of workshops or seminars, please get in touch. I would love to hear from you (d.i.lewis@leeds.ac.uk).

Bibliography

Include useful literature/resources including, but not limited to, anything you've cited in the snapshot.

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**denotes international co-author*

