



Open Research Awards 2025

Overall runner-up

Vinayak Sharma (Department of Management)

Title of case study

Open-Source Teaching Materials for Circular Business Model Innovation: Creating a Learning Commons for Sustainable Business Education

Introduction to the case study

My PhD research explores how businesses can integrate social value into circular economy transformations. As a Teaching Associate for the BEPM009 Strategic Innovation module, I've developed an approach to open research by creating publicly accessible teaching materials that bridge theory and practice in circular business model design. By developing shared case studies, collaborative workshops, and open-access learning resources, I've established a "learning commons" where students engage with real-world sustainability challenges while contributing to an evolving repository of knowledge that benefits both academic research and business practice in circular economy transitions.

Detail the practices you have used to support openness/reproducibility

I implemented several interconnected open research practices in my teaching:

1. Collaborative Case Study Development: Working with Prof. Allen Alexander, I developed workshop materials based on real business cases (Nokia, BMW, PepsiCo) that were openly shared with students. These case studies were enriched through student contributions and then made available to future cohorts, creating an evolving knowledge base.
2. Open Workshop Templates: I created reusable, adaptable workshop templates for business model design and hypothesis testing that students could apply to their own projects. These templates were shared openly through the module's virtual learning environment and my public GitHub repository.
3. Pre-publishing Research Insights: I pre-published emerging findings from my doctoral research on social value integration in circular business models, allowing students to engage with and critique research-in-progress before formal publication.
4. Peer Review Process: I implemented a structured peer review process where student projects underwent collaborative critique, enabling knowledge co-creation and research validation.
5. Open Data Collection: With student permission, anonymized project outputs were collected to form an open dataset of circular business model innovations, which I've made available for other researchers and practitioners through Zenodo.

Outline any barriers or challenges you encountered, and how they were handled

The primary challenge was balancing intellectual property concerns with open sharing. Some case studies contained sensitive business information, which I addressed by developing abstracted versions that preserved learning value while protecting confidentiality.

Another challenge was ensuring consistent quality of student contributions to the open knowledge base. I implemented a peer review and moderation system where student submissions were evaluated against clear criteria before inclusion in the shared repository.

Finally, I faced technical barriers in making materials accessible across platforms, which I resolved by adopting standard file formats and creating both high and low-bandwidth versions of resources.

What benefits have you identified from your case?

This approach has yielded multiple benefits: students develop deeper understanding by engaging with real research-in-progress; my PhD research has benefited from diverse perspectives and rapid feedback; teaching quality has improved through iterative refinement based on collective insights; and businesses implementing circular models have gained access to emerging knowledge.

The open resources have extended impact beyond the classroom, with practitioners from industry accessing materials over 500 times. This approach has also fostered interdisciplinary collaboration between business, engineering, and environmental science departments, creating unexpected research synergies around circular economy challenges.

How do you plan to continue this case moving forward?

I plan to formalize this approach into an "Open Circular Economy Teaching Commons" that systematically captures and shares teaching materials, student projects, and research insights.

Next steps include developing a dedicated online platform with version control, enhanced metadata, and impact tracking features. I'm also initiating collaboration with international partners to create a global repository of circular business model case studies.

Additionally, I'll be incorporating structured methods for student contributions to my doctoral research, with clear pathways for co-authorship on publications.

Finally, I'm developing guidelines to help other researchers adopt similar open practices in sustainability education.

Conclusions

This case demonstrates how teaching can become a vehicle for open research that benefits students, researchers, and practitioners simultaneously. By creating transparent, collaborative knowledge-sharing processes around circular economy business models, we can accelerate both learning and the practical implementation of sustainable business innovations.

Links to any materials/resources relevant to the case

Workshop materials: <https://bit.ly/circular-innovation-workshops>

ELE module resources: <https://ele.exeter.ac.uk/course/view.php?id=18503>

Zenodo dataset: <https://zenodo.org/record/15188913>

Pre-print of research findings: <https://osf.io/7rqd4/>

GitHub repository: <https://github.com/vs373/vinayaksharma-circular-business-models>

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