

MANCHESTER
1824

The University of Manchester

The University of Manchester
Institute of Teaching and Learning

DR. JAMES BROOKS

STUDENTS AS COURSE CREATORS: CREATING A NEW 'INDEPENDENT STUDY' COURSE UNIT

ITL FELLOWSHIP 2021/22

**PROJECT
REPORT**

www.staffnet.manchester.ac.uk/umitl/
teaching.learning@manchester.ac.uk

ITL Fellow 2021/22

JAMES BROOKS



Dr James Brooks is a Reader (Teaching & Scholarship) in Electrical Engineering and the Academic Lead for Pedagogy for the Faculty of Science and Engineering (FSE). James' work focuses on developing lifelong authentic learning in staff and students. He has a particular interest in how a broad range of academic research in learning theory and behavioural economics can create a culture of teaching and learning excellence.

Fellowship Student Partner Intern

FLAVIA ZHOU

STUDENTS AS COURSE CREATORS: CREATING A NEW `INDEPENDENT STUDY` COURSE UNIT

ITL Fellowship Project

This project involved the creation of a course unit where students independently research a topic of their choosing and build high quality, inclusive learning material for it. More broadly, my vision was for students to use the independent study unit to forge a path for those that follow. We can use this to guide both the specific topics we teach within disciplines and our more general approach to blended learning.

Context

From my previous work with staff and students, I had a strong belief that *“Achievement is maximised when teachers see learning through the eyes of students and students see learning through the eyes of themselves as teachers”* (Hattie & Yates 2014). Being able to see teaching and learning through each other’s eyes has wide-ranging effects on motivation, engagement, authentic learning and staff development. As such, I hoped that by addressing this change in perspective, I could address four areas:

- We want to learn from our students about how best to support their learning for both inclusion and digital delivery – I wanted to see a greater integration of the student voice in our curriculum.
 - We want our students to be independent learners who gain a deep understanding of their subject material and show they can continue to be lifelong learners and skilled communicators after they leave the University.
 - Students want more choice and options in their later years of study. This sort of autonomy and ownership also drives increased student engagement.
 - We should inspire our academics to continually develop high-quality online learning materials.
-

Objectives of the Fellowship project

To address these four areas, the project involved creating a cross-disciplinary course unit where students independently research a topic of

Objectives of the Fellowship project (cont.)

their choosing and build high quality, inclusive learning material for it. More broadly, my vision is for students to use the independent study unit to forge a path for those that follow. We can use this to guide both the specific topics we teach within disciplines and our more general approach to blended learning. Through this course, the student gets the option to explore a topic of their choice, to take ownership of their learning, and to see their learning very directly through the eyes of a teacher. Lecturers get rich feedback from the students and a direct and clear path to integrate the student voice into the curriculum. The training on how to study effectively and how to create high quality, inclusive learning material can also be fed into the training of a wider group of students, academics and other teaching and learning professionals.

Activities

Stage 1: Standing on the shoulders of giants

The first stage of my work was to talk to others who have done something similar before. Several academics offer pedagogic projects to third year, fourth year, or MSc students - these have a different scope and aims but showed that students are interested in this sort of work and that it can be very successful. Not counting the discussions I had before the project was approved I had 18 meetings with various academics, PS staff and students from across the University who had offered similar aspects of what I wanted to do. Meeting with a wide range of motivated and innovative colleagues was inspiring and addictive – a personal benefit I hadn't expected was in expanding my network and getting to know about so many great things that are happening outside of my faculty. I had to force myself to stop these

Activities (cont.)

discussions, as I needed to move into the actual development but what I learnt greatly shaped what was to follow.

Stage 2: Co-creation of the course

Working with Flavia (Student Partner Intern), we split the work in developing the course material. Flavia worked on the Blackboard space and associated text and layout while I developed initial versions of the content. We would then meet to go over the work we had done. I would highly recommend working one-on-one with a student like this for any new material you develop – especially if the student doesn't already know the material. As a result of these discussions, I significantly re-wrote content for multiple lectures in response to Flavia's feedback, enabling me to encompass the student voice in curriculum design.

Challenges faced

Though the project mostly ran smoothly, there were inevitably a few challenges, the first of which was making sure I devoted enough time to work on it! I had been trying to fit it around my other work but there was always something urgent getting in the way. It ran a lot smoother when I blocked off Fridays to devote to just my Fellowship.

The second challenge, one that I'm still working on, is trying to get involvement of a wider range of academics. I had initially wanted the students' learning materials to be partially marked by the academics who taught in the relevant area, to inspire them with what the students had created. This additional loading was, as expected, unpopular and ultimately

Challenges faced (cont.)

didn't go ahead, so I'm still looking for other ways to showcase the excellent work the students have done.

In a similar vein, I had always intended that this unit would be suitable for inclusion in multiple programmes across the faculty. Uptake has been smaller than I would like but there has recently been some movement on this with students from the Department of Mathematics now able to join, and I am also exploring whether I can expand this through our [University College for Interdisciplinary Learning \(UCIL\)](#) or other institutions.

Student partnership

My student partner, Flavia Zhou, and I met regularly to discuss what we had done and agreed what we would each work on between our meetings. We did initially explore the idea of a joint pedagogic output but decided to focus on the development of the course directly. Flavia created almost the entire Blackboard site, including the layout and the descriptions for each section – we thought that this being written in the student voice would be more engaging for the students taking the course. She also acted as peer reviewer for all of the technical content. We went through my drafts of the content together, both to give her the background but also to test out my teaching. This feedback was invaluable, and in an ideal world, I wouldn't want to create course material any other way.

Flavia also took on aspects of design for the content itself: after we went through the material, she took the slide decks and created visuals, including procuring physical props and liaising with Media Services to produce professional-quality images and graphics.

Collaborative work

This project would look very different without the support of colleagues from across the University. The Institute of Teaching and Learning team have a wide view of fantastic work taking place across the University and even now, six months after the project has ended, the team are still providing introductions and connections to grow the impact of the project. I met with colleagues from all three faculties, including eLearning teams, academics and the Library staff.

Outputs

The main output was the creation of a course unit for third year undergraduate students - [EEEN31001 Independent Study and Technical Explanations](#). The process of creating this unit had a number of knock-on benefits:

- I now have a well-developed set of material on independent study – this combines research on deliberate practice, learning theory, study skills, motivation, research skills, behaviour change and habits. I’m hoping this will be used beyond the course and I’m looking to share and develop this further into a short online course.
- I have a collection of material on how to create learning materials. This uses a combination of a social constructivist approach to active learning with multimedia learning theory and cognitive load theory. This linking of social psychology with the controlled experimental approach of the cognitive scientists is something I am excited about and would like to see more of in the conversation about how learning works best. Again, my hope is that this material will be widely reused, I’m currently developing

Outputs (cont.)

training material for academics within FSE based on the content developed in this unit but I would also like others to reuse the content I've developed.

- I delivered a presentation at the Advance HE 'Students as Co-Creators Symposium', January 2023, which shared my learning from running this project, which I hope will inspire others to take on the co-creation or partnership approach within their work ([Students as Co-creators presentation](#)). During the delivery of the unit, I experimented with many of the ideas I've wanted to try. This included students giving summaries of past lecture content, students creating their own marking rubric and grade descriptors, and general active participation and reflection in the lecture room. I'm looking at other conferences where I can discuss what sorts of courses these techniques would work in.
- Finally, there is the material the students have produced, a collection of videos and documents teaching a wide range of interesting technical topics. With each students' permission, I hope to create a repository of examples of the great work the students have done, firstly to inspire our academics but also to use as outreach and examples to prospective students who are applying to Manchester.

Impact

The immediate impact is small; this was never going to be a project whose output was measured after one year. That said the students who took the course have made a noticeable shift in mind-set, around seeing learning from the eyes of an educator but also in applying the independent study techniques to their other courses. The true measure of success for these students is after their first year in industry, reflecting on whether this

Impact (cont.)

course has impacted the way they learn and communicate in their graduate jobs. The course itself has grown in numbers and can now be taken by students from two departments with the hope that this will continue to grow over time.

Reflection

I feel the Fellowship was a huge success, and one I have immensely enjoyed being a part of. It's connected me with some fantastic and engaged educators from across the University and the conversations I had have inspired and motivated me. There are of course things I would change in hindsight. Time management, particularly at the start of the project could have been better and that would have enabled me to give better support to my student partner. I also could have done more to introduce this unit to the students when they were deciding whether to select it as one of their options.

Overall, it's made my job so much more fun and hopefully benefited, and will continue to benefit, staff and students alike.

Next steps

The next steps follow directly from the outputs.

Next steps (cont.)

- Firstly, to have more direct impact I would like to increase the intake of the course up to 100 students per year. My vision here is to have a webpage or YouTube channel where I release student work every week throughout the year.
- I want to find ways to make use of the course materials I have developed to help support students with independent learning and in staff development. I'm also looking for anywhere I can discuss the material and the ideas in the hope that others can take a more radical, experimental, approach to their teaching.
- Finally, I will be looking for funding for projects to develop the ideas presented here so that they can become part of the normal way we teach at Manchester and beyond.