**Associated conference:** “Yes we can!” - Digital Education for Better Futures (EDEN 2023 Annual Conference)

**Conference location:** Dublin City University (DCU), Dublin, Ireland

**Conference date:** 18-20 June 2023

**How to cite:** Nolan, S. A Translational Approach to Digital Learning Innovation: Enabling Digital Innovation at Durham University. 2023 *Ubiquity Proceedings*, 3(1): 1-6. DOI: https://doi.org/10.5334/uproc.62

**Published on:** 27 October 2023



UBIQUITY PROCEEDINGS

ubiquity press open access https://ubiquityproceedings.com

# A TRANSLATIONAL APPROACH TO DIGITAL LEARNING INNOVATION: ENABLING DIGITAL INNOVATION AT DURHAM UNIVERSITY

*Sam Nolan, Durham Centre for Academic Development – Durham University, UK*

***Correspondence**: Sam Nolan: s.j.nolan@durham.ac.uk*

## Abstract

In this paper we explore how we adopted a translational approach to educational development, which incorporates educational and digital innovation, staff development and student support into a single department. Through exploring three case studies of innovative work, we highlight the key enablers that a translational approach provides such as the agility to undertake research work which can quickly feed into teaching and learning practice. By rethinking the traditional role of learning technologists and by embedding students as partners, we believe such as approach can reap dividends on allowing for meaningful digital innovation in learning and teaching.

## Keywords:

Digital Learning, Digital Innovation, Students as Partners, Translational Education, Technology Enhanced Learning

## Introduction

Durham University is a research-intensive university located in the city of Durham, in the north-east of England, a member of the prestigious Russell Group of leading research-intensive universities. Established in 1832, it is one of the oldest universities in England and has a long history of academic excellence. The university is organized into four faculties: Arts and Humanities, Science, Social Sciences and Health and the Durham University Business School, which offer a wide range of undergraduate and postgraduate degree and are home to around 16,000 undergraduate and 4,000 postgraduate students and 1,800 academic staff. Durham is home to a diverse student body, with students from over 130 countries, and has a strong tradition of research, with many of its departments ranked among the best in the UK.

In 2018, the University established the Durham Centre for Academic Development (DCAD), bringing together a number of areas including technology enhanced learning, educational development, innovation funding and student support into one unit. The ethos behind this was to embed a translational approach to education innovation. The notion of translational education comes from the field of translational medicine (Cohrs et al., 2015), which has revolutionised the field of applied medical research by placing research units within hospitals, so that the distance from discovery to patient is minimised.


Figure 1. Schematic showing the interlinking process of translational education. ALT: Diagram Showing Educational Innovation leads to Academic Excellence which leads to Student Success

DCAD is unique amongst its peers by minimizing the gap between pedagogical innovation, staff development, and student learning gain. This is achieved by developing and funding new approaches to teaching and learning through DCAD's Education Laboratory. These approaches are then shared with members of staff through the training provided by the academic excellence team, and introduced to students through the student success team.

The first step in this process, focussed on Educational Innovation, is achieved by DCAD's Education Laboratory. This facility, based in our £40M Teaching and Learning Centre, provides funding through three schemes for digital innovation, namely:

**Collaborative Innovation Grants (CIG):** This grant scheme is designed to support staff across Durham University to develop innovative and inclusive learning and teaching approaches to enhance student learning and success, and to disseminate good practice across the institution and beyond. Grants of up to £5K are available under the CIG scheme.

**Enhancing Accessibility Grants (EA):** These grants support the learning of students with disabilities and develop inclusive approaches to education which benefit all students at Durham. This scheme is based on Durham's allocation of the UK Government Disability Premium funding and grants of up to £40K are available.

**Strategic Innovation Grants (SIG):** These grants are up to £30K and are for technologies identified as addressing a strategic learning need. The outcome of each project is a recommendation to the University as to whether to deploy the technology institutionally or not ..

Each grant, regardless of category, lasts for up to one year and is co-led by a disciplinary academic member of staff, a member of the digital learning team and a student. We'll consider below some examples of successful projects as short case studies.

**Case Studies**

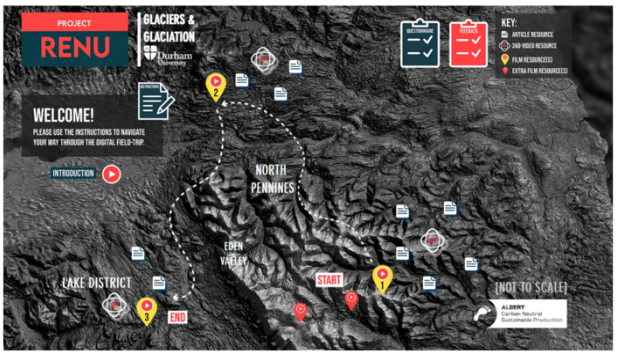
1) **The Use of Immersive Realities in Teaching**

The presence of the Education Lab at Durham has allowed for the development of research links with other universities such as Carnegie Mellon, where immersive technologies such as VR and AR are being trialled. The Education Lab ran the first national online conference on the use of VR in Learning and Teaching, which took place on 21st June 2021, with over 80 delegates joining online. This swell of interest led to several funded projects, including:

a) **Developing Virtual Field Trips in Geography (EA)**

During the Covid pandemic, field trips were difficult to run. Using funding from our Enhancing Accessibility grant scheme this project, called Project RENU (Research Expedition for Net Zero and Universal Learning) used innovative communication techniques and sustainable digital practices to produce a digital field-trip experience with the aim of making environmental learning accessible to all students in a fundamentally sustainable way. The project worked with a commercial partner to produce engaging, documentary-style, interactive resources which allow the user to experience the field trip as if they were there. The project went on to win a prestigious Green Gown award for sustainable education.

Figure 2. Screenshot from the Virtual Field Trip



b) **Using AR in Physics Learning (CIG)**

Following the success of the Geography project, the Physics department, in partnership with our digital learning team, developed Microsoft Hololens-based resources to help explain complex invisible phenomena in Physics, such as the shape of Magnetic Fields. The work also included reaching out to a local NHS Education Centre, which itself was a hub for excellence in the use of AR, and the co-facilitation of an institutional workshop on the use of AR in teaching.

c) **Using VR in Drama (CIG)**

This project, a partnership between the English Studies department and the digital learning team, seeks to develop a more complete and nuanced understanding of how 360° video, when experienced through virtual reality (VR) technology, might support students to understand the impact of stage directions, directorial decisions, and point of view in representing dramatic texts on stage.

2) **The Transitions into HE Project (SIG and EA)**

The transition students make when leaving secondary/high school and joining a university course can be challenging (McGhie, 2017). To address this, the Education Lab funded a project to build an online course, presented through our Virtual Learning Environment, for all students to engage with prior to the commencement of their undergraduate studies. This asynchronous course includes four key elements: Preparing for Academic Study, Introducing Independent Learning, Developing Digital Literacies and Preparing to Arrive. Unique amongst other such courses, it is built by student developers and was developed using review committees comprised of students. The course is actively used by approximately 4,500 students per year, about 85% of all possible new students. A survey conducted to assess how students felt before and after using the course was conducted, and the word clouds below show indicative responses to the questions (i) 'how did you feel before undertaking this course?' and (ii) 'how do you feel after taking the course?'

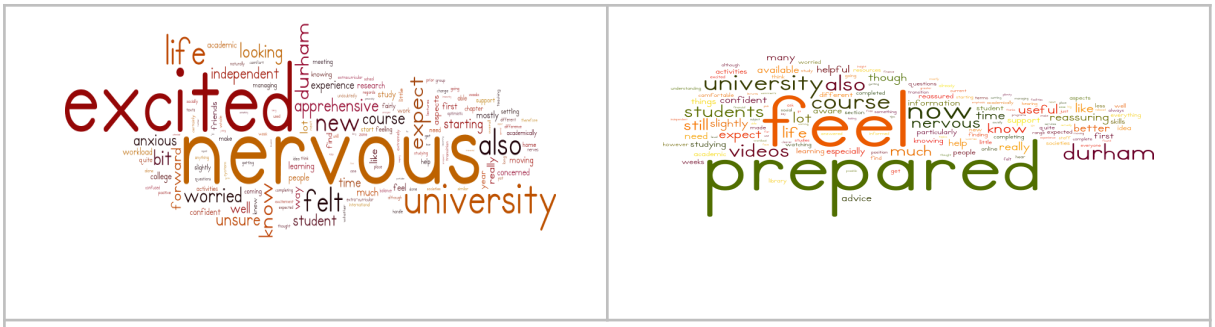



Figure 3. Word clouds indicating words used by 80 respondents in response to questions: 'How did you feel before taking the course?' (left hand side) and 'How did you feel after taking the course?' (right hand side). ALT: Word clouds indicating excited and nervous as dominant words (left hand side) and feel prepared dominant words (right hand side)

The course continues to evolve and this year an additional element exploring mental health and well-being is being developed.

3) **Building Inclusive Learning Communities during the Covid-19 Response**

Like all universities, in March 2020 Durham University needed to quickly pivot its teaching online due to the impact of the Covid-19 pandemic and the associated enforced lockdowns.

The placement of the Education Lab in DCAD and the bringing together of different elements (especially the digital learning and academic development teams), enhanced innovation significantly during this period. Initially the focus was on supporting staff to teach online and result in the production of:

- A two-week online course, 'Introducing to Learning and Teaching Online,' led by DCAD and developed by staff from DCAD and colleagues from Durham's Business School: This course gave staff a student's-eye view of the online learning experience. It was taken by over 1200 academic staff. Of the 200 who responded to an end-of-course questionnaire, over 80% agreed the course was well designed and appropriate to their needs.

- Eight asynchronous self-study courses, which covered a range of topics with a focus on active pedagogies as an underpinning framework: These are also available as Open Educational Resources (DCAD,2022a).

- Over 60 live online workshops focussed on building active learning into live online sessions through the use of breakout rooms and problem based learning.

- Establishment of a Digital Learning Community of Practice with 26 'Sharing Practice' seminars during the 20/21 academic year.

A key problem identified by academic staff during this period was the difficulty in developing inclusive communities for students when they were learning in online environments. As a result of this, a research project on Inclusive Learning Communities was quickly developed by colleagues working in the Education Lab. A team of three staff members from DCAD and eight student co-researchers undertook:

- 28 focus groups involving 103 students, recruited from across all faculties and year groups, representing a range of demographic characteristics.

- 19 staff interviews, including staff from all four faculties.

This work will be shortly published, but an open educational resource which details key findings from this work, which can be utilised in your own practice, can be found here (DCAD,2022b).

## Discussion

i) Central Support

Key to this move to translational education has been a rethinking of the traditional model of the 'Learning Technologist' as instead a 'Digital Education Consultant' (DEC). Whereas, before DCAD formed, our learning technologists had supported training and development around the use of the Virtual Learning Environment, in DCAD we introduced a new role of Digital Learning Adviser to take the vast majority of VLE-related support and created the new role of Digital Education Consultant whose focus was:

- Consultation with departmental and faculty leads on the use of digital technologies in teaching.

- Advice and guidance to teaching staff on the pedagogic use of new technologies.

- Co-development and leadership of Collaborative Innovation and Enhancing Accessibility Funded projects

- Training and development on digital pedagogy in the classroom.

The role of DEC is therefore both strategy- and innovation-linked, in a way that hadn't been fully realised in the previous iteration of the role. DECs are both consultants, project managers and Co-I's, allowing projects to reach fruition and not become overly onerous to academic staff with limited time.

ii) Students as Partners

The second critical element is the involvement of students as partners throughout the projects. The four kinds of student partnership, as outlined by Mick Healey, are:

- ‘Consulted’ Partnership: In this form of partnership, students are consulted for their opinions and feedback on various aspects of their education. However, the ultimate decision-making power still rests with the teacher or institution.

- ‘Collaborative’ Partnership: This type of partnership involves joint decision-making between students and teachers, with both parties contributing equally to the design and implementation of the learning experience.

- ‘Cooperative’ Partnership: In this form of partnership, students take on specific roles and responsibilities within the learning environment, such as co-teaching, peer mentoring, or leading discussions.

- ‘Collegial’ Partnership: This highest level of partnership involves students and teachers working together as colleagues with mutual respect and shared responsibilities. This means that students are seen as active co-creators of knowledge and are given significant agency in the learning process.

The table below looks at the role of students in each of the case studies we have outlined:

Table 1: Table showing student roles from Case Studies in context of model of (Healey et al., 2014)

| Case Study | Role of Student | Most Linked Element of Students as Partners Model |
|---|---|---|
| Use of Immersive Realities in Teaching | Students co-write the proposal for funding and act as developers on the project. Students will be co-authors on any published work. | Collaborative and Co-operative Partnership |
| The Transitions into HE Project | Students act as developers on the project; interviewees and students act a review committee for the project. | Collaborative and Co-operative Partnership |
| The Inclusive Learning Communities Project | Students act as co-investigators on the project, organising focus groups, interviewing other students and analysing the data. Students will be co-authors on any published work. | Co-operative and Collegial Partnership |

Working with students as partners is central to all our work and is critical for its authenticity and impact. We continue to make for paid student involvement a mandatory requirement for all proposed projects.

**Pros and Cons**

The successes of the work evidenced above suggest that developing a central teaching enhancement unit built around the translational model is a powerful way of driving meaningful teaching innovation in an institution. However, this approach comes with both positive and negative aspects. Positives include:

- An agile way to develop digital resources, through a research lens, that address a particular need so that the findings can be shared quickly across the institution and the wider sector.

- A way to embed staff/student partnership as the underlying model for all strategic learning enhancement work within the institution.

- Creating pathfinder projects to explore the cutting edge in digital learning and teaching, which can be scaled up for institutional roll-out.

Whereas more negative aspects would include:

- Although not unique to this model, centres for teaching and learning such as DCAD can often end up supporting innovation with individual academic staff, which may or may not be tied to larger strategic needs of the department. We try to tackle this in Durham by having regular meetings with the leadership teams in academic departments and developing interventions focussed on improving the quality of education and the student learning experience at programme level as well as supporting individual staff.

- In a centre like DCAD, it is often easy to lose sight of the big picture. In academic year 22/23 we are developing a database system for detailing interactions with individuals and departments so that these can be actively tied to improvements in teaching and learning identified by (for example) end of module/programme questionnaires.

## Conclusion

In this paper we have explored the use of a translational approach to educational digital innovation at Durham University through the development of the Durham Centre for Academic Development. The approach has allowed us to cultivate a culture of digital education innovation both within and beyond the post-pandemic period. This approach, which rethinks the role of the Learning Technologist and embeds students as partners is having a profound impact on teaching and learning within the institution. Our next steps will be to increase the impact with departments through developing closer working networks with academic and support departments.

## References

Cohrs, R.J., Martin, T., Ghahramani, P., Bidaut, L., Higgins, P.J. and Shahzad, A. (2015). Translational medicine definition by the European Society for Translational Medicine.

DCAD (2022a), DCAD Online Asynchronous Teaching and Learning Courses (2022). https://dcad-resourcebank.webspace.durham.ac.uk/2022/03/17/online-teaching-and-learning-guides/

DCAD (2022b), Developing Inclusive Learning Communities (2022). https://community.dur.ac.uk/lt.team/inclusive-communities/#/

Healey, M., Flint, A., & Harrington, K. (2014). Engagement through partnership: students as partners in learning and teaching in higher education. Higher Education Academy.

McGhie, V. (2017), Entering university studies: identifying enabling factors for a successful transition from school to university, *Higher Education*, 73, pp.407-422.