Exploring the Classroom of the Future

Lunchtime seminar, Thursday 23 May, 12.30–2.00
TU Dublin, Bolton Street Room 380
Exploring the Classroom of the Future

Before

After
Research shows that the traditional lecture is not the most effective way to learn, but the large tiered theatre is expected by students and lecturers alike to be part of the higher education experience. This seminar aims to expose participants to the impact of the built and designed environment on the teaching and learning process, and thereby to challenge lecturers and students to imagine better learning spaces. The seminar will encourage participants to critique both real and imagined classrooms, lecture halls and other learning spaces (e.g. PC labs) with a view to imagining how to improve on current models of teaching practice. Participants will be encouraged to imagine better learning spaces suited both to student learning and to teaching practices. The ultimate aim is to enable participants to contribute in an informed manner to emerging discussions regarding learning space design, especially in the context of the Grangegorman campus.
Exploring the classroom of the future

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Overview

Exploring learning space design and some current directions in educational research

- What is a classroom or learning space in 2019?
- Have/how have learning spaces in campus-based institutions changed with the evolution of learning theories and technologies?
- What relationship is evolving between the design of learning spaces and our learning and teaching practices?
Collaboration

Both Technological University Dublin (City Campus) and Purdue University are engaged in the redesign of physical spaces.

At Purdue, a new Active Learning Center has been built in the middle of the campus (fall 2017).

The building has 27 active learning classrooms.

The building also consolidates all the STEM libraries into one central location.

Purdue is literally making active learning central to its mission.
Collaboration

Both Technological University Dublin (City Campus) and Purdue University are engaged in the redesign of physical spaces.

TU Dublin campus at Grangegorman

We are actively reflecting on the design and use of physical learning spaces in 21st century universities.

Considering whether/how architecture has interacted with rapid changes in educational technology and pedagogy.
Time to explore...

Photo by Element5 Digital on Unsplash
Let’s visit Sydney!

https://www.youtube.com/watch?v=G5Z-QjSo8Nc&t=5s

This clip gives a tour of the University of Technology Sydney (UTS) Business School in 2015, and its diverse range of learning spaces.
What are your responses?

Captured from Menti:
Is there any substance to all this style?

Why should the design and configuration of spaces matter?

- Advances in learning theory and research in higher education
- Digital technologies removing analog barriers
- Our changing staff and student populations
Architecture and education: well-developed research on the design of schools and classrooms

Less well-developed for higher education

... which is also digital

... and post-compulsory
Information poverty to information abundance

Moving away from transmission-oriented approaches in education towards dialogue, conversation, active learning

- ...because we have more than one copy of the book!
- ... and learning theory has changed
  - From behaviourism to constructivism - post-war development of thinking around how humans learn (Carlile, Jordan & Stack, 2008; Laurillard, 1993; 2001)
  - Current evidence from neuroscience indicates support for a blend of approaches (O’Connor, 2010)
Spaces have been blurring for some time...

VLE/LMS mainstreamed in higher education since the early 2000s (VLEIreland, 2018)

Numerous educational resources are available elsewhere online: OERs (JORUM, MERLOT, NDLR), Slideshare, YouTube, institutional websites, academics’ personal websites
Open scholarship and open access in Libraries: Arrow, RIAN, PLOS

Wifi and constant connectivity - student ownership of smartphones estimated at over 90% (O'Rourke, 2017)

Learning taking place inside and outside the classroom and campus as well as online and offline

Is any space a learning space in 2019?
What is a learning space in 2019 at Purdue?
What is a learning space in 2019 at TU Dublin?
The interaction between space and practice

Evidence that changes towards more open and shared physical spaces afford new opportunities to educators and students, research pointing to the contribution of design and space towards improving student learning, enhancing shared practices amongst teachers (Alterator & Deed, 2013; Brooks, 2010; Cohen & Harvey, 2008; Carolan, Curran, & McCormack, 2019)

Evidence for the development of confidence and enhanced practice amongst lecturers/faculty through providing active learning spaces (FitzSimmons, Neubauer & Haston, 2018) - and concern that deteriorating spaces may constrain practice

As university educators develop and enhance their teaching practice, we can identify new opportunities for the design and redesign of physical spaces towards active learning and connection with other students but not a case of cause and effect
Opportunities to explore this interaction

Theorising the potential for further change and development: building on the work of Rook, Choi and McDonald (2015) who call for stronger connection between learning theories and architecture; using Activity Theory (Engestrom, 1987) and sociomateriality to research interaction between space and activities/practices; bringing innovative practices into this exploration.

Using this research and theorising to inform consultations between people teaching and learning and those designing and building spaces for teaching and learning.

Roles of academic developers and educational technologists in collaborating with colleagues towards more effective use of new kinds of learning spaces and adoption of open practices (Clegg, 2009; Fisher & Newton, 2014; Jamieson, 2013; Rooney, McAvinia & O’Keeffe, 2019).
More open spaces, more open practices?

We are seeing more open practices in teaching and learning at our institutions:

- Inclusion of opportunities for students to contribute to knowledge across our programmes at all levels (CoCREATE curriculum project, experiential learning, undergraduate research)
- Inclusion of students as partners in curriculum design
- Sharing of teaching practices across teams and collaborative working in programmes (DELTA)

Flexibility in the configuration/reconfiguration of space could facilitate and promote these practices; we need to find out what approaches are most effective
Enabling pedagogical opportunities in the design of learning spaces (EPOL Project)

Change management project involving staff and students:

- builds upon current institutional practice (Teaching champions initiative) and international studies (JISC, 2018; WALC, 2018)
- explores perceived impact upon active learning strategies, teaching practices and the quality of the overall learning experience in selected room exemplars
- aims to provide tailored professional development to support practical student centred approaches in Grangegorman new formal and informal learning spaces
Enabling pedagogical opportunities in the design of learning spaces (EPOL Project)

How can I make informed choices? What are my options? How might my decisions impact upon students’ learning or my current teaching practice?
Collaboration with Purdue

Collaborative research in partnership

1. **Currently**: Literature review and desk study of data from Purdue
2. Identifying existing institutional practices and how these might be influenced and changed
3. Symposium with academics, students, architects in May 2019 to inform research design
4. Primary research to commence in September 2019 in Dublin drawing on approaches and methods used in Purdue (case studies, Activity Theory modelling)
5. Outputs to support planned uses of space in both universities
Next steps

Today’s event

Open House event later in 2019 funded under the National Forum Seminar Series - all welcome

Collaboratively-authored paper arising from the literature review/desk study

Fieldwork phase in TU Dublin from September 2019 collaborating on existing work at Purdue:

- Configuring rooms in existing campus buildings as they will be in Grangegorman
- Adopting specific strategies and layouts to evaluate the effect of these with students
- Analysis to support and inform final planning and fitment at Grangegorman and in refurbished sites
Thank you!

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