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# Time to stop building lecture theatres

**Jo Dane**

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# Time to stop building lecture theatres

## Jo Dane

Education Consultant Jo Dane examines the future of the lecture theatre, one of the oldest space typologies in the world. Are they still relevant? What are the alternatives to this formal learning environment?

**If you timetable it they will come. But only for three weeks! This is the bane of universities in the current environment of lecturing, mobile technologies and GenY students. Why turn up to lectures if you can simply download the content at a time that suits you?**

The predominant university learning experience for over 1500 years has centred on lectures and been conducted in lecture theatres, a spatial archetype that has changed very little (refer Figures 1-4). Lecture theatres were the ideal spatial response to the resources of the day, when a scholar would orate his knowledge. Until recent decades, the presentation format was limited to oration supplemented with blackboard notation.

In recent decades however, new technologies from overhead projectors and data projectors to internet-enabled multimedia have become available to lecturers to enhance their presentations. Now it is common for lectures to be recorded by the university and made available for students to download online.

While the recording of lectures was initiated to support occasional absences and to provide great reference material, many of the current generation of students have quickly realised that downloading and listening to lectures is often just as effective as attending them. This is especially so if lecturers make little attempt to interact with students during a lecture.

And so a pattern of attendance has emerged in recent years whereby students turn up to lectures for weeks one to three (or enough time for students to work out the course structure, assessment and tutorial schedule), but then stop attending until towards the end of semester, when students hope to gain special insights to the exam.



Figure 1. Remains of Lecture Hall, University of Alexandria, circa 5th Century  
Source: Majcherek, 2008<sup>1</sup>



Figure 2. Lecture at the University of Bologna, circa 1300s  
Source: Olmert, 2003<sup>2</sup>



Figure 3. Iowa State University Chemistry Lecture, circa 1912  
Source: Iowa State University Library Special Collections<sup>3</sup>

There is very little evidence published on this issue, although most universities collect room data to determine utilisation rates. Utilisation is defined in the Tertiary Education Facilities Management Association (TEFMA) Guidelines<sup>5</sup> as 'room frequency' x 'room occupancy', in other words, how often a classroom is timetabled and how many people are occupying the space, relative to its maximum capacity.

Around week 4 of every semester, student numbers are counted in most major formal learning spaces and are tracked against the number of students timetabled to attend. This data regularly reveals systemic under-attendance of lectures in particular, confirming that many lecture theatres are grossly underutilised, despite being heavily timetabled.

Take for example, the lecture theatre shown below (Figure 5) which was taken during a campus visit (university to remain nameless) during the middle of semester. With a capacity of 400, this lecture theatre had approximately 10 students in attendance. I have witnessed this many times and listened to facility managers express frustration as the same pattern is repeated semester after semester.

Lecture theatres, some of the most expensive building infrastructure on campus, sit mournfully underutilised for weeks on end. (Not to mention they sit barren and unused for almost six months between semesters too!)

The timetable often guides critical infrastructure planning, which is a flawed process as it only represents theoretical demand rather than actual demand. In a perfect (old) world you would timetable large classes to large lecture theatres for the early weeks of semester and then move to smaller lecture theatres for the remainder of semester.

But this is simply not feasible.



Figure 4. Lecture at Purdue University  
Source: Purdue University website<sup>6</sup>



Figure 5. Lecture Theatre during timetabled lecture (source: Jo Dane)

# So what to do?



## Step 1.

### No new lecture theatres

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Stop building new lecture theatres. For a start this will save Australian universities approximately AUD 4 million<sup>6</sup> for a state-of-the-art 200 seat theatre. Lecturing, as the foundation of the university experience, is becoming redundant. With the continuing progress of online learning and MOOCs, made all the more accessible by omnipresent mobile technologies, students are showing preference for accessing instructional content online.

However, this should not be viewed as a student preference for online learning per se. While there is clearly a place for online-only learning, universities are increasingly adopting a hybrid or blended learning approach. This enables the best components of online learning to be experienced with the best components of face-to-face (F2F) learning. The best of F2F learning incorporates a social environment, collaboration, interaction, access to a variety of resources (often owned by students) and the ability to experience a wide range of learning activities.

(To those of my colleagues who enjoy lecturing, and may even be quite good at it, don't despair. Lecturing in person may still have a place as an occasional event, but should not be viewed as the default undergraduate experience.)



## Step 2.

### Be patient - change takes time

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Take a deep breath. Prepare to transition from lecturing to broadcasting. This process will not happen overnight. It may take ten years and that's okay.

We are talking about 1,500 years of tradition that is in the process of becoming superseded. So don't expect change to happen quickly.

# 3

## Step 3. Embrace online learning

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Encourage and promote academics to redevelop lecture content into an online format. Again, not an overnight process, but one that will benefit from teamwork and (existing) university resources. You might start with younger academics, yet to invest time in the production of F2F lecture content.

Harness the energy of technology-literate academics. And here's a controversial possibility: give staff permission to utilise content already available in the ether! There is so much great and engaging content out there on YouTube, Khan Academy, TED and numerous other sources.

Why should lecturers have to continually reinvent the wheel?

# 4

## Step 4. Support your stakeholders

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Motivating academics to embrace this change may not be an easy proposition. After all, their workload and research demands make time for developing new course material difficult. Some possible methods may include:

- Making the transition a key component of the academic promotion process
- Providing research relief for redeveloping teaching content
- Appointing support staff, postgrads and senior students to help academics develop online material
- Adopting team teaching so that a team of lecturers can share the load of the content redevelopment
- Planning for a piecemeal approach to redeveloping content. A whole course does not have to be redeveloped in one semester. It may take two or three years to fully transition a subject from F2F to online.

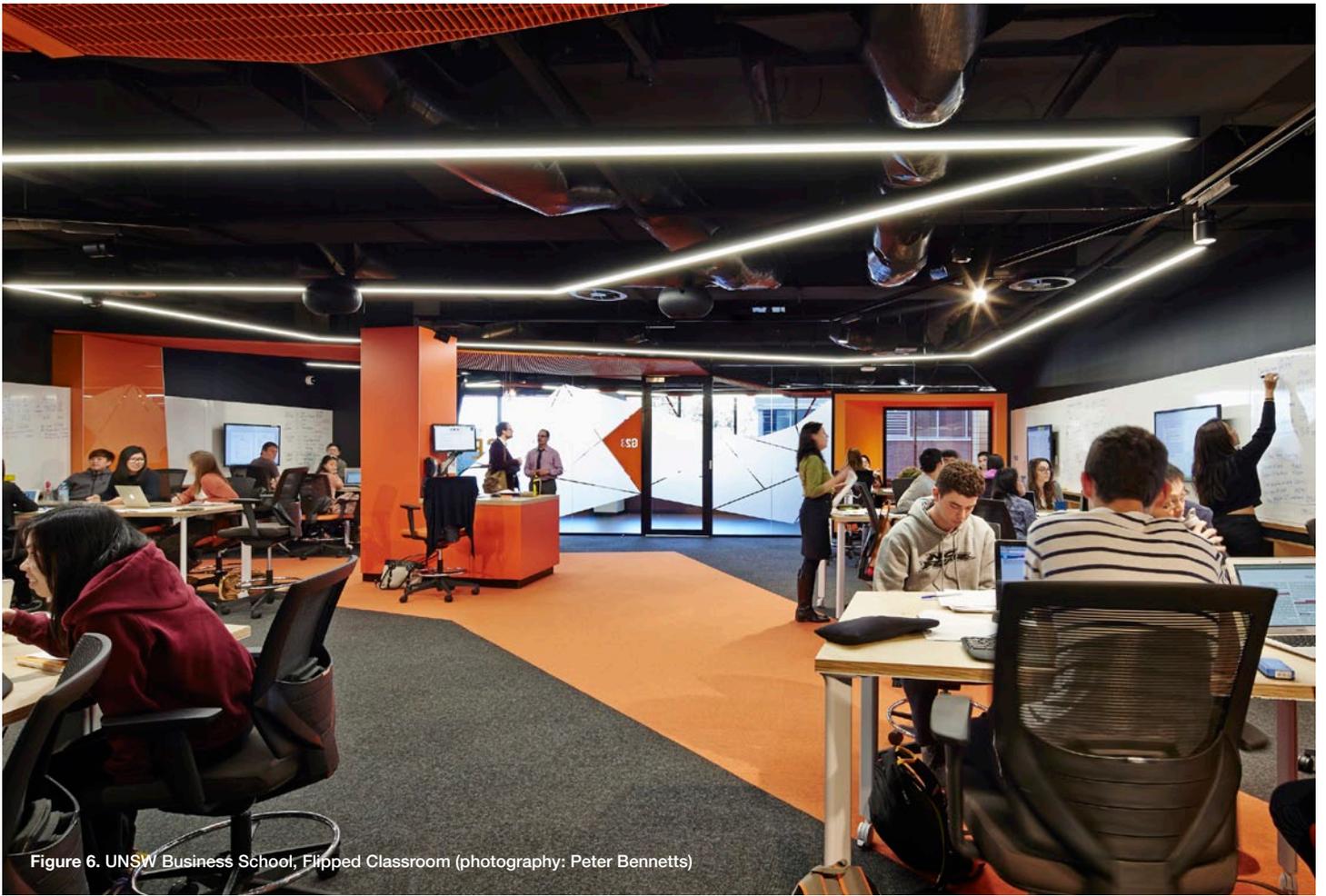


Figure 6. UNSW Business School, Flipped Classroom (photography: Peter Bennetts)

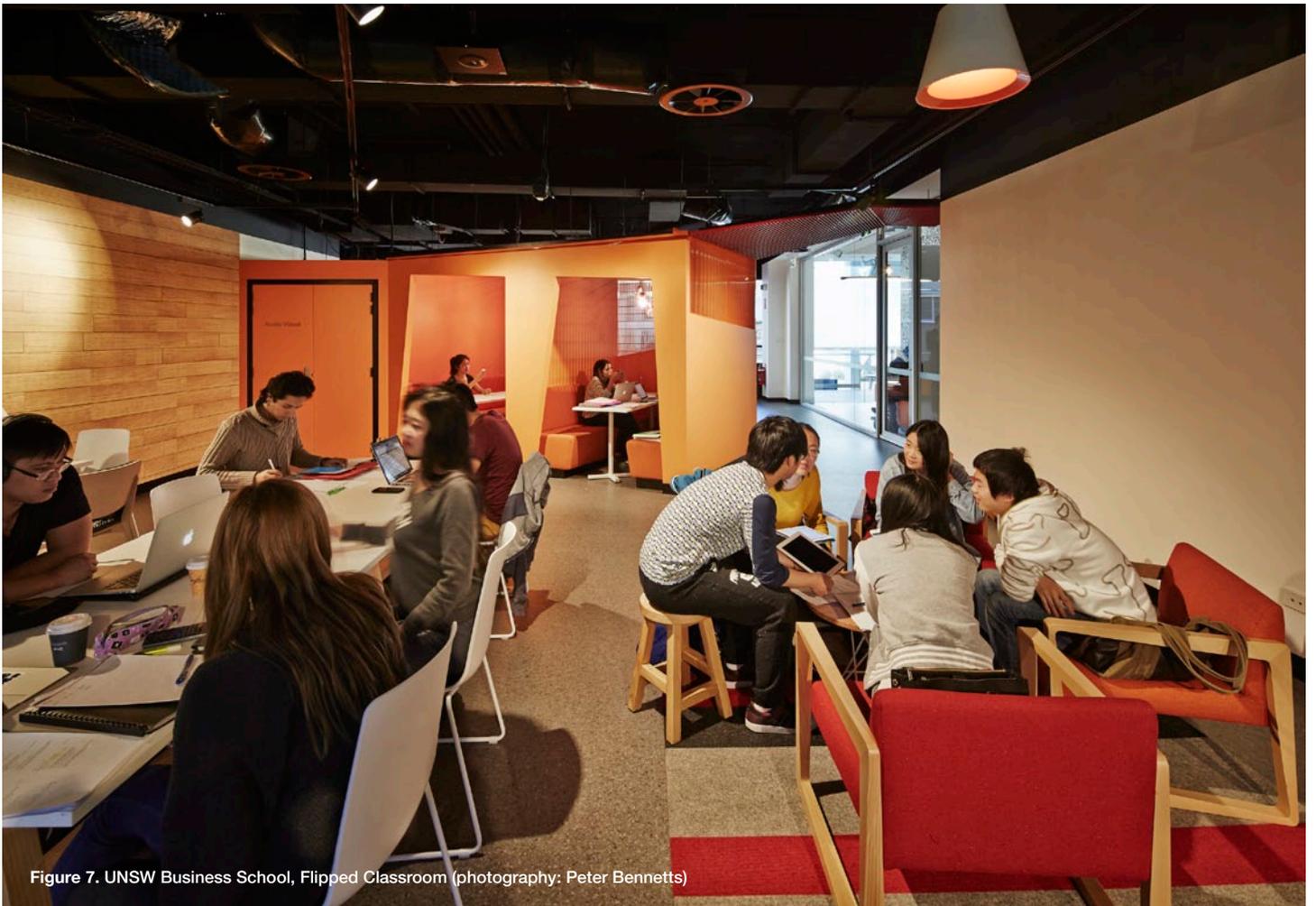


Figure 7. UNSW Business School, Flipped Classroom (photography: Peter Bennetts)

# 5

## Step 5.

### Embark on a journey of discovery

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Over time, as 'lectures' become broadcast and demand for F2F lecturing decreases, transform existing lecture theatres into Active Classrooms. This is the new space typology of the future.

As the name suggests, Active Classrooms will encourage academics to plan interactive and engaging experiences for their students. Students won't want to miss class in this environment. As a rule of thumb, each student will need at least 3 - 4 m<sup>2</sup> of floor space to ensure room to move around, access to a variety of resources, and to enable a wide variety of learning activities. Emerging evidence suggests that learning in Active Classrooms does yield better student outcomes, and presumably further research in this area will continue to support this finding<sup>7 8</sup>.

Woods Bagot recently designed a series of Active Classrooms on the ground floor of the Australian School of Business building at the University of New South Wales (UNSW), refer Figures 6 - 10. Conceptualised as 'flipped classrooms' the series of four formal classrooms has already helped transform learning at UNSW. Two classrooms have a 60 person capacity, while the other two classrooms are sized for 48 people.

The Australian School of Business is undertaking research to track the teacher and student experience of these Active Classrooms, with early indications that students love them. In a recent interview for the upcoming New Generation Learning Space Design 2015 conference to be held in Sydney, Associate Dean (Digital and Innovation) Nick Wailes provided the following insight<sup>9</sup>:

*"We also spend a lot of time speaking to students about what the experience is like and have discovered two things. The first is they feel like **they get to know their classmates a lot better** because rather than sitting passively side by side of you, they're actually working with others and that's enhancing their cross-cultural confidence to work with other students. The second thing we've found is **students are able to generate ideas easier**, because they actually have to apply knowledge – they actually have to work out solutions to challenges within teams. As a result the learning experience is really enhanced."*

#### Conclusion

As we embark upon a new year, it is time for universities to tackle the issues surrounding lecture theatres: stop building them, start transitioning to online lectures and focus the F2F experience on providing engaging, interactive, technology-rich experiences. Campus infrastructure needs to adapt to meet the demands of GenY students who do not want to be lectured to, but at the same time value social learning opportunities.

Providing more 'active classrooms', such as the recently completed Flipped Classrooms at the Australian School of Business at UNSW, will ensure that coming to campus will remain a worthwhile and valued experience for future students.

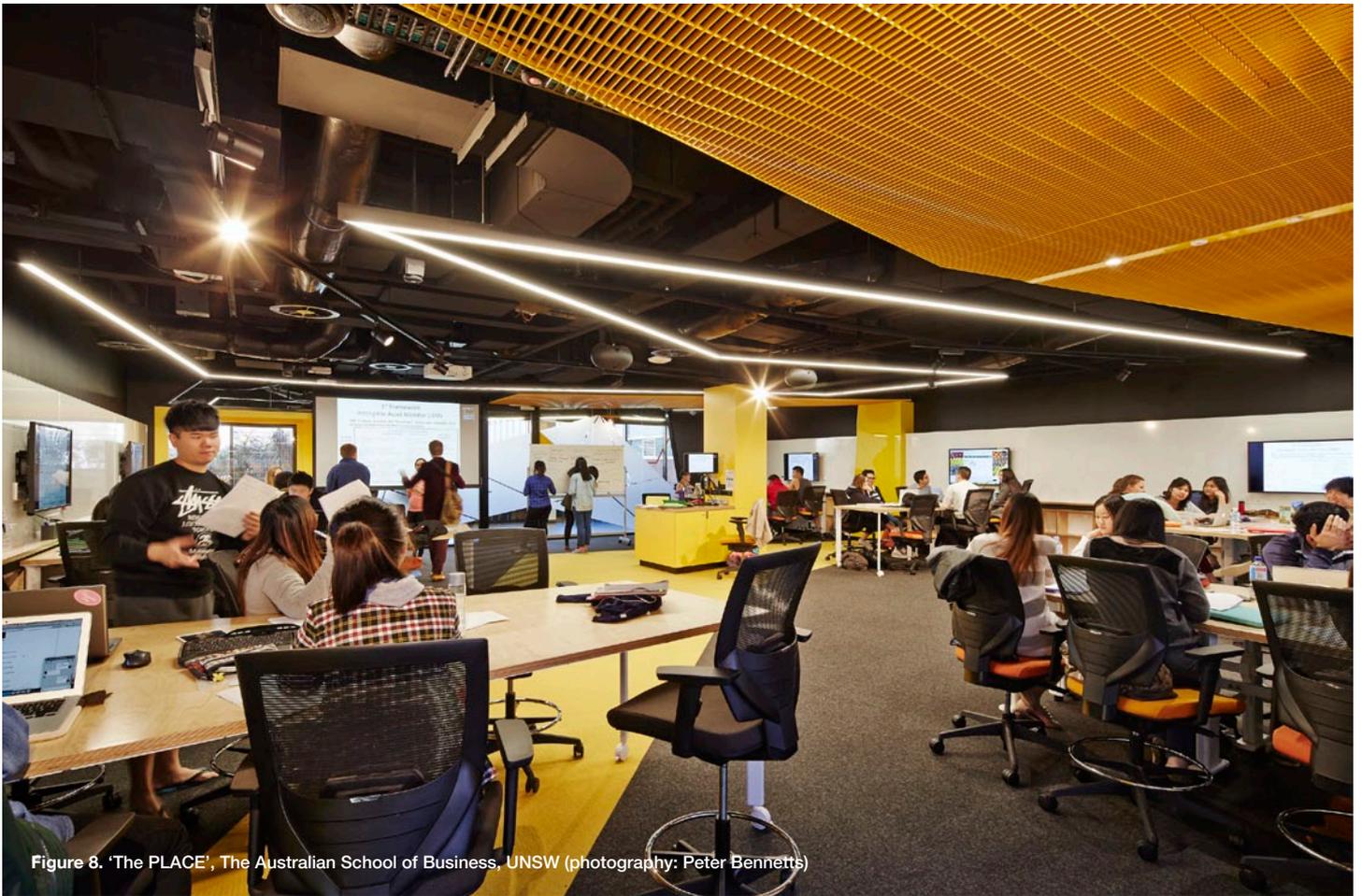


Figure 8. 'The PLACE', The Australian School of Business, UNSW (photography: Peter Bennetts)

## Footnotes

- 1 Majcherek, G. (2008). Academic Life of Late Antique Alexandria: A View From the Field. In M. El-Abbadi & O. Fathallah (Eds.), *What Happened to the Ancient Library of Alexandria?* Leiden, The Netherlands: Koninklijke Brill NV.
- 2 Olmert, M. (2003). *Smithsonian Book of Books*. Washington DC: Smithsonian Institution.
- 3 <http://www.add.lib.iastate.edu/spcl/exhibits/homecoming/1912homecoming.html>
- 4 <https://engineering.purdue.edu/ENE/Newsletters/ENews/Spring%202013/firstyear-engineering-flipping-the-lecture>
- 5 <http://www.tefma.com/uploads/content/26-TEFMA-SPACE-PLANNING-GUIDELINES-FINAL-ED3-28-AUGUST-09.pdf>
- 6 Broad costing provided by Wilde and Woollard
- 7 Scott-Webber, L., Strickland, A., & Kapitula, L. R. (2013). Built Environments Impact Behaviors: Results of an Active Learning Post-Occupancy Evaluation. *Planning for Higher Education Journal*, V42N1(October-December).
- 8 Freeman, S., Eddy, S., McDonough, M., Smith, M., Okoroafor, N., Jordt, H., & Wenderoth, M. (2014). Active learning increases student performance in science, engineering, and mathematics. *PNAS*, 111(23), 8410–8415.
- 9 Available from conference website: <http://www.designforlearning.com.au/>

# 'The PLACE', The Australian School of Business, UNSW

1,400 m<sup>2</sup> GFA  
1,000 m<sup>2</sup> UFA

**70%** efficiency

**56%** formal learning

**44%** informal learning

## Leadership Team

Georgia Singleton  
Alan Duffy  
Jo Dane  
In collaboration with  
Professor Peter Jamieson

## Project cost

AUD 4 million  
(AUD2,857/m<sup>2</sup>)

## Capacity

**262** (3.8 m<sup>2</sup>  
per person)

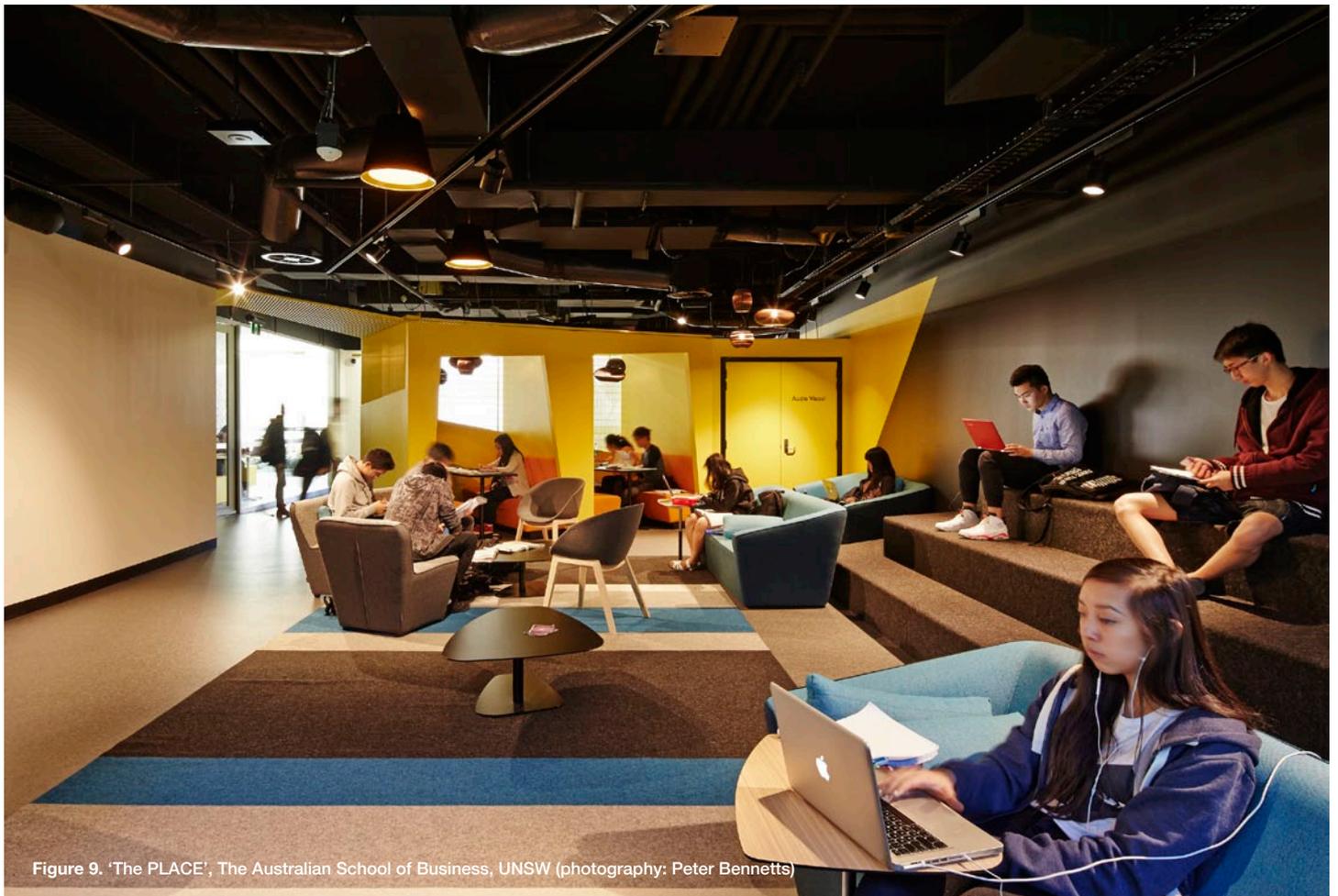


Figure 9. 'The PLACE', The Australian School of Business, UNSW (photography: Peter Bennetts)



Figure 10 UNSW Business School, Flipped Classroom (photography: Peter Bennetts)

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## Jo Dane

### About the author

**Jo Dane**  
**Education Consultant**  
**Senior Associate, Woods Bagot**

Jo works within the Education, Science and Health Sector with a specific focus on Education Consulting. Her passion lies in finding ways to improve the student experience, through the combined pillars of pedagogy, design and technology.

Jo is an active researcher having consistently published papers and presented at conferences for over a decade. Her PhD research (in progress) has culminated in the development of the 'Effective Teaching and Learning Spatial Framework' which uniquely unites educational and environmental psychology theory. She has been researching new generation learning environments for twelve years, bringing the dual perspective of educator and designer to every project. [\[more\]](#)



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