‘The Digital Classroom Project’ at the University of Kent

Silvia Colaiacomo
Arena Centre for Research-Based Education, UCL, UK

Abstract

‘The Digital Classroom Project’ at the University of Kent aimed to investigate the relationship between space, technology and pedagogy in two new seminar rooms equipped with special furniture and technology. A key aspect of the project was the close collaboration between academics, professional services and students. The analysis of qualitative and quantitative data shows that both students and staff benefitted from working in these rooms and that the spaces allowed opportunities to experiment with new pedagogical approaches tailored on students’ needs.

Keywords: active learning, learning technologies, learning spaces, distributed leadership

Introduction

‘The Digital Classroom Project’ Phase 1 (academic year 2017-18), is an investigation aimed at developing a clear understanding of the use of two seminar rooms designed and equipped with specialist furniture and technology to create ‘Digital Classrooms’. The project was led by the Unit for the Enhancement of Learning and Teaching (UELT) at the University of Kent and presented at the 2018 APT conference at the University of Greenwich. The seminar rooms (24 seats each) are equipped with group tables, repeater screens for group work and an interactive touch screen at the front (Figure 1). The rooms are centrally timetabled and used for teaching activities by the three Faculties at the University (Arts & Humanities, Social Sciences and Sciences).

The project can be considered an example of distributed leadership (Jones and Harvey, 2017) as it comprised the work and input of four teams around the University (Academic staff, UELT, Information Services and Timetabling). Each team held with critical responsibilities and expertise for a different aspect of the project.

UELT’s investigation focused on observing the relationship between space, technology and pedagogy. We were interested to see how the rooms were used for teaching purposes; the activities that took place there; advantages and barriers of their use and whether they had an impact on teaching and learning.

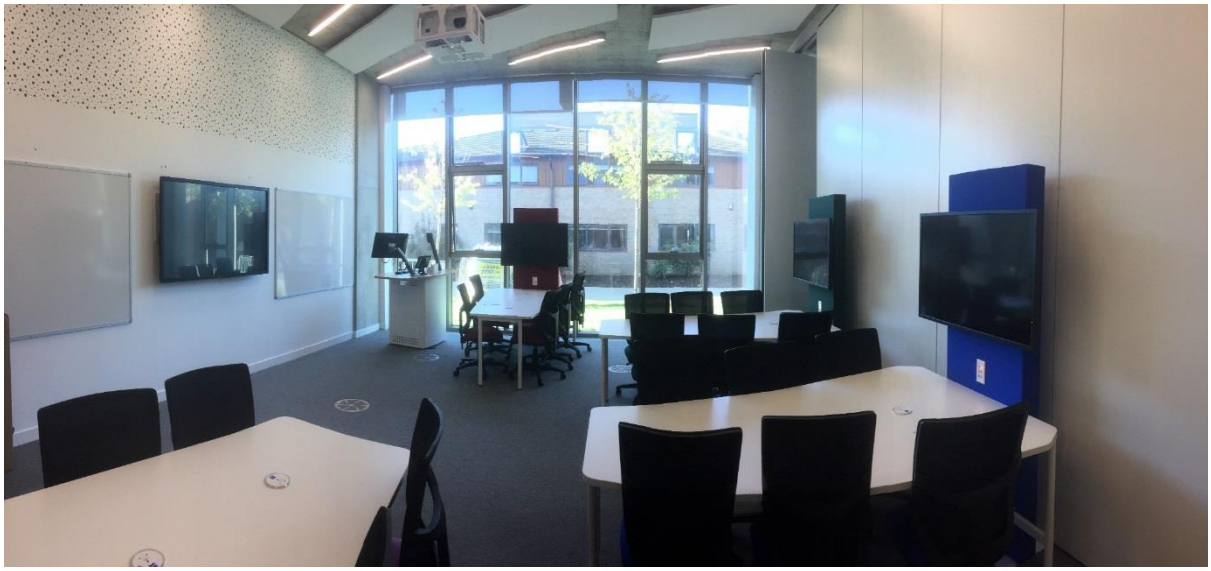

Figure 1: Digital Classroom – Templeman Library - University of Kent

Data analysis and discussion

Qualitative data and quantitative data was collected throughout the academic year and analysed using a grounded theory approach (Glaser and Strauss, 1967). Qualitative data comprised 10 hours of class observations and in depth interviews with 15 members of staff and 25 students across different discipline areas, both UG and PG. Quantitative data comprised an analysis of student numbers, attendance patterns, room usage (Table 1). The analysis of data suggests that both students and staff enjoyed and benefitted from working in these rooms and led to three main areas and findings: the need for spaces that enhance collaboration and purposeful exchanges; the importance of reliable and flexible technologies that can be used for different purposes and enable new pedagogical practices; and, the importance of team cooperation, including the active involvement of students.

First of all, the rooms were considered flexible spaces enabling work with various teaching and learning styles and fostering active learning (Prince, 2004) group work and cooperation. The rooms allowed users to move freely, group tables facilitated collaborative work and the variety of technology available was used to different degrees, depending on disciplinary needs (Healey, 2000) and learning and teaching preferences. The terms ‘adaptability’ and ‘flexibility’ were used recurrently in interviews to signify that the rooms allowed different pedagogical approaches without forcing users to opt for a particular model of delivery.

As well as enhanced interactions, the second key finding concerned the positive response to the technology available. The rooms provided direct access to both core university systems (e.g. University VLE and lecture capture system) and non-core tools (e.g. Google docs, commercial applications and social media). The possibility to use personal devices in class and to access and share files, applications, data repositories and resources on the repeater screens encouraged students to extend their learning experience outside the scheduled seminar time (Waite, 2011). This was also supported by the nature of the assignments given, such as interactive posters. Finally, the collaborative teaching approach enhanced by the rooms’ layout facilitated working on soft skill training (Brungardt, 2011). Students worked around group tables discussing tasks, assigning roles and sharing workloads throughout the

sessions; teaching staff noted how skills such as the ability to negotiate, present and debate developed more robustly than in a traditional space.

The project highlighted the importance of collaboration and shared leadership as only through the support and expertise of the different teams the rooms managed to move from 'equipped spaces' to an active learning environment (Oblinger, 2004). This project modelled a valid example of collaboration (Jones et al., 2012) between academics and professional services.

Schools	No. Modules	No. Academics	Seminar	Lecture	Other
Business School	5	8	4	1	
Economics	1	4	1		
Unit for the Enhancement of Learning and Teaching	1	1			PC Lab
Film Studies	1	1	1		
Anthropology and Conservation	2	2	2		
TOTAL	10	16	8	1	1

Table 1: Number of modules, academics and event types in the digital classrooms 2017-18

Reflection on conference presentation

Two points were raised in the discussion following our presentation and they related to possible risks of depersonalisation of teaching (Roland and Chapman, 2009) and an emphasis on technology at the expense of pedagogy.

Both points are quite common in the literature on innovative teaching (Tabata and Johnsrud, 2008) and considering them in the context of the conference presentation provided a valuable opportunity to develop a deeper understanding of how we articulate our findings. Our data did not lead to the elaboration of concepts such as depersonalisation of teaching and an emphasis on technology at the detriment of pedagogy. They seem to suggest quite the opposite. The recurrent use of the word *flexibility* in interviews indicates an element of personalisation of pedagogical approaches and awareness of different uses of technology. Our data shows how the interaction of space, technology and pedagogies triggered a 'virtuous circle' where each component played a crucial role. The desire of academic staff to

experiment with new teaching approaches was the essential starting point of this circular process. In the context of this project, such desire seemed to be mostly initiated from an understanding that the dichotomist model lecture/seminar does not suit the needs of a varied student population (Keyser, 2000). Personalising the session to the needs of the students was therefore something all the academics involved considered crucial when planning their courses. This in turn led to a collaboration with professional services teams and students to experiment with possible solutions provided by the technology and the space. Finally, a better understanding of technology and its potential offered further opportunities to stretch teaching practices beyond what initially planned (for example by reshaping assessment to include digital artefacts). The cycle saw students having an important and active role, not of receivers but of co-constructors of learning and teaching (Crawford, 2012), as students' feedback, level of engagement and understanding was central to the development of the most appropriate input and resources.

Conclusions and further development

'The Digital Classroom Project' – Phase 1 outlined a model of shared leadership and collaboration between academic and professional services to enhance learning and student experience in Higher Education (Bovill and Bulley, 2011). The success of this project resided in the input and cooperation of teams holding different types of expertise and responsibilities. A three-step 'virtuous cycle' was identified in the synergy between academics, students and professional services and it is articulated as desire to experiment with new pedagogical approaches, looking for and receiving support and, finally, stretching initial ideas further. The response to Phase 1 was very positive and in 2018-19 the number of modules scheduled in the rooms increased from 10 to 17 across 8 schools. Phase 2 of the project is currently undergoing and moving in the direction of exploring discipline-based approaches (Baik and Greig, 2009) and extending the student-staff partnership to develop the design of future spaces.

Reference list

Baik, C., and Greig, J. (2009), 'Improving the academic outcomes of undergraduate ESL students: the case for discipline-based academic skills programs', in *Higher Education Research and Development*, 28:4.

Bovill, C., and Bulley, C.J. (2011), 'A model of active student participation in curriculum design: exploring desirability and possibility', in: Rust, C. (ed.) *Improving Student Learning (ISL) 18: Global Theories and Local Practices: Institutional, Disciplinary and Cultural Variations*. *Series: Improving Student Learning (18)*, Oxford: Oxford Brookes University: Oxford Centre for Staff and Learning Development, pp. 176-188.

Brungardt, C. (2011), 'The Intersection between Soft Skill Development and Leadership Education', in *Journal of Leadership Education*, 10:1, 1-22.

Crawford K. (2012), 'Rethinking the student/teacher nexus: students as consultants on teaching in higher education' in Neary, M., Stevenson, H., Bell, L., *Towards Teaching in Public: Reshaping the Modern University*, London: Continuum books, pp. 52-67.

Glaser, B. G., and Strauss, A. L. (1967), *The discovery of grounded theory: strategies for qualitative research.* Chicago: Aldin.

Healey, M. (2000), 'Developing the Scholarship of Teaching in Higher Education: A discipline-based approach', in *Higher Education Research & Development*, 19:2, 169-189.

Jones, S., Lefoe, G., Harvey, M. and Ryland, K. (2012), 'Distributed leadership: a collaborative framework for academics, executives and professionals in higher education', in *Journal of Higher Education Policy and Management*, 34:1, 67-78.

Jones, S. and Harvey, M. (2017), 'A distributed leadership change process model for higher education', in *Journal of Higher Education Policy and Management*, 39:2, 126-139.

Keyser, M. W. (2000), 'Active learning and cooperative learning: understanding the difference and using both styles effectively', in *Research Strategies*, 17, 35-44.

Oblinger, D.G. (2004), 'The Next Generation of Educational Engagement', *Journal of Interactive Media in Education*, 2004:1.

Prince, M. (2004), 'Does Active Learning Work? A Review of the Research', in *Journal of Engineering Education*, 93, 223-231

Ronald S. L. and Chapman, A. (2009), 'The technologisation of education: philosophical reflections on being too plugged in', in *International Journal of Children's Spirituality*, 14:3, 289-298.

Tabata, L. N. and Johnsrud L. K. (2008), 'The Impact of Faculty Attitudes Toward Technology, Distance Education and Innovation', in *Research in Higher Education*, 49, 625–646.

Waite. S. (2011), 'Teaching and learning outside the classroom: personal values, alternative pedagogies and standards', in Education 3–13, 39:1, 65-82.