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Changing the culture of learning

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This chapter will explore the changing context of learning and teaching in UK higher education in the twenty first Century and discuss some approaches to facilitate a pedagogical shift to active learning for student engagement and attainment. Throughout the chapter, the relationship between pedagogy, space and technology will be discussed, although the focus is on how technology and learning spaces can facilitate active learning. Spatial flexibility can prevent lecturer inertia in learning methods and problem based and active learning encourages not only different learning but more varied and ambitious assessment. These new pedagogies can contribute to the development of participatory approaches to curriculum development and enhanced student outcomes.

It is widely acknowledged that the context of higher education is changing, influenced by processes of globalization and marketization as well as changing demographics and student expectations (Pokorny and Warren, 2016). In practice, this has significant implications for the way that Higher Education is delivered, with a much greater emphasis on universities being responsive to students, who are increasingly empowered in decision-making processes through models of partnership and co-creation (Students at the Heart of the System, Higher Education White Paper, 2011). Coupled with this is the notion of competition and the commodification of education, with changing student expectations related to value for money and customer service models, with measures of success determined by student engagement, satisfaction and attainment. Conversely neo-liberal managerial approaches in higher education have led to an audit culture, which has flourished in the last two decades (Lauder et al, 2012), with an emphasis on performativity, targets and quantitative measurement. Blackmore (2015) identifies conflict within higher education where prestige concerns are often a source of tension in the new league table driven culture. These tensions can be found between research and teaching, academic recognition, learner control over what and where they study and ultimately the friction between excellence and inclusion.

Successive white papers have placed the emphasis firmly on enhancement of the quality of the student experience, acknowledging the importance of a consumer focus in a context where students are required to pay higher fees. In addition, the Teaching Excellence Framework focuses attention on teaching quality, which BIS define as “..*teaching practices which provide an appropriate level of contact, stimulation and challenge, encourage student effort and engagement, and which are*

effective in developing the knowledge, skills, attributes and work readiness for students." (BIS, 2016. Teaching Excellence Framework Technical Consultation for Year Two)

There is no doubt that the world of the learner is affected by these transformations in higher education. This raises new challenges for educators to engage with the world of the learner to foster an approach to learning that encourages students to become more active participants in the management of their own learning, motivated to develop deep level knowledge and to develop the skills of critical reflection and reflexivity further blurring the boundaries with teaching and learning towards co-creation and co-production.

The HEPI/HEA Survey (2016) Student Experience Survey explored a number of indices of student satisfaction and concluded that overall satisfaction positively correlated with excellent teaching, by educators who engage with continuing professional development to extend and modernise their pedagogical skills. This also correlated with a perception that there had been meaningful investment in the learning environments within the institution.

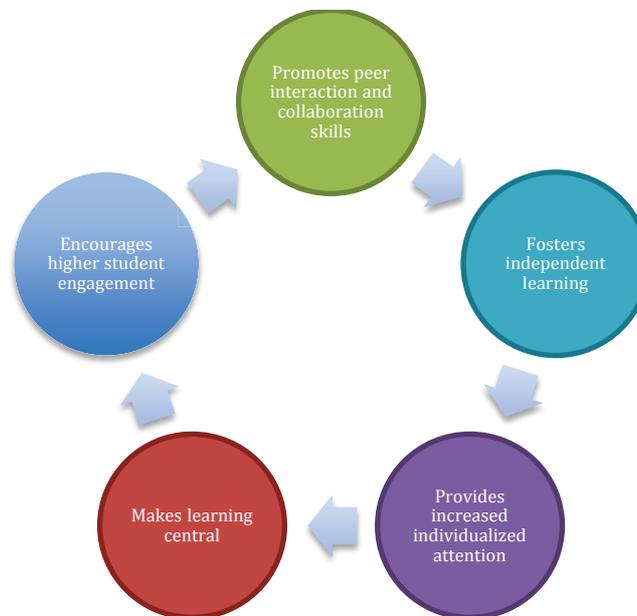
Fraser (2001) argued that

"The traditional classroom has colonised the psyche of higher education institutions over many years and it has dictated many teaching behaviours. It is said that students in higher education will have spent over 20,000 hours in 'classrooms' by the time they graduate (Fraser, 2001. P1.)

However, the changes in higher education discussed above have heralded a paradigm shift from didactic and verbal modes of instruction to pedagogical approaches that encourage active learning through the use of mixed modalities of instruction (Rourke and Coleman, 2011). The emergence of new technologies has led to new pedagogies, shifting power to the learner. Technology ownership has become democratized and the significant student access to mobile devices highlights the importance of technology-enabled spaces to allow their use in the context of the student's learning journey.

These new pedagogies of active learning have been found to be beneficial for student engagement and learning, with a reduction in failure and attrition rates through the use of supportive learning environments, where there are greater opportunities for student-tutor interaction as well as peer interactions. In a review of the literature, Hamdan et al (2013) concluded that active learning approaches lead to measurable improvements in student motivation, attendance and attainment. This in turn leads to deeper level learning with better development of transferable and cognitive skills, such as critical thinking, problem solving and team working (Scott-Webber, Strickland, and Kapitula, 2013)

Figure 1: Benefits of active learning



Flexible furniture and spatial considerations of circulation and accessibility promote personalized and inclusive education as they enable students to learn in a way that benefits them. Thus the role of the lecturer shifts from being the provider of knowledge to facilitator of research and critical application of different information sources. It could be argued therefore that rather than academics being deskilled through new managerialist agendas, they have been reskilled through a new focus on student experiences and pedagogical approaches (Kolsaker, 2008). Academics have significant autonomy over andragogical and pedagogical approaches and can use this to create innovative and creative curricula that satisfy both the consumer and the enterprise agendas. Although technology is not a panacea for all of the problems that higher education practitioners are currently faced with, the creation of enhanced learning spaces and the growth of blended learning approaches can be embraced by educators to improve the student learning experience and develop skills and knowledge for a range of student futures.

Collaborative and active learning has been found to be particularly beneficial in engaging students and yet traditional classroom design often makes it difficult to facilitate collaborative and active learning opportunities. Flexible learning spaces can be used more creatively to provide student-centred approaches to learning and teaching. Technology enabled classrooms provide opportunities for flexible and active learning and provide the means for interactive and collaborative pedagogical approaches. Well-designed physical learning spaces provide an important

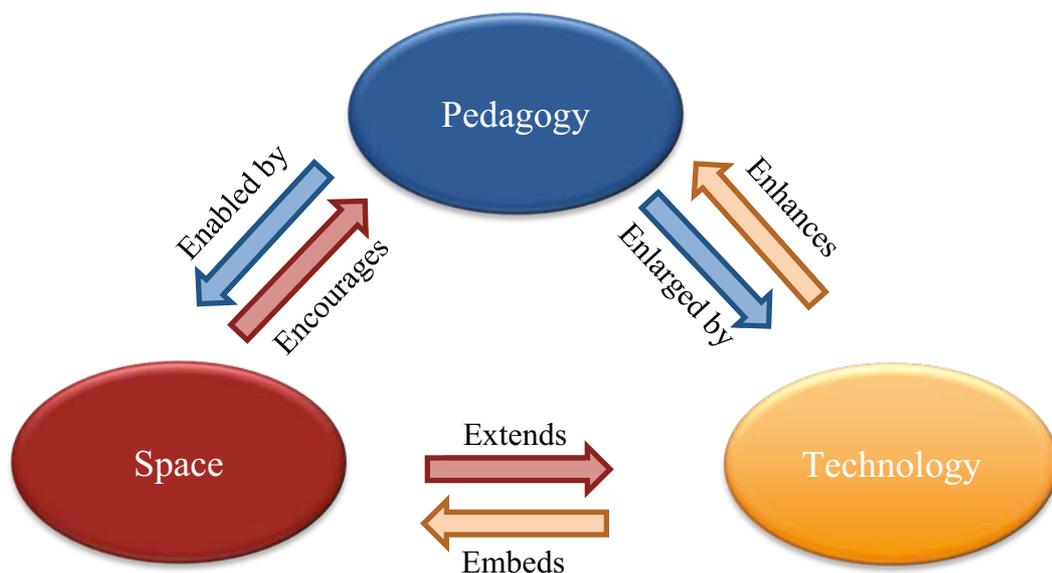
environment therefore for the engagement of students in quality learning experiences.

Nationally and internationally, there is growing interest in the development of learning spaces that facilitate learner-centric pedagogies in higher education institutions. There are numerous examples of innovative projects and curricula, which are developing active learning approaches within technology enriched learning spaces. Academics are increasingly being asked to integrate technology into teaching practices to engage students with active learning and the early adopters and innovators are often acting as catalysts for change within local contexts.

“Academics at individual and school level can work to improve and diversify the physical, intellectual, psychological, technological, and social environments that facilitate learning through connectivity and community. Shifts from directive learning to active or experiential learning mean that spaces require a multi-functionality, offering lecturers and students more flexibility, more mobility for themselves, their learning objects and furniture”
(Beard, 2009 p9)

However, at an institutional level, the wider infrastructure and change management process often lacks integration. Whilst the vision for change may initially be based on compelling pedagogical rationale, the actual design and construction of the spaces may privilege architectural and technological imperatives and operational considerations such as timetabling. Radcliffe (2008) advocates a model, which he calls the PST model of learning space design to balance aspects of pedagogy, space and technology to provide a more systematic approach to learning space design.

Figure 2. PST model of learning design. (adapted from Radcliffe, 2008)



Systematic change at an institutional level is needed in order to avoid such piecemeal approaches to change at the margins of institutional behaviour and transform the culture of learning in twenty first century higher education institutions (Beyond Prototypes Report, 2013).

“For substantive change to occur, transformational development efforts must involve systematic, goal-directed, sustained activities that are integral to the daily work of academic community members.” (Moore et al, 2007. p.46)

Clearly the design of learning spaces has the potential to impact on the way that learning takes place, but spatial design and the organization of furniture alone is not enough. Cultural change requires a more fundamental transformational process of challenging existing beliefs and values, whilst creating a sense of community and a common purpose within that community (UK Higher Education Learning Space Toolkit, 2016). Transformational change requires leadership with a clear strategic vision and purpose with communication processes to engage staff with the vision in order to build this sense of a learning community.

In addition, successful change requires systems of training and coaching, with on-going support to enable staff to engage with the vision and goals of the change process and to develop capabilities for 21st Century pedagogies. This can take a variety of formats, including workshops, show and tell sessions, drop in sessions as well as accessible guidance in multi-media formats. Buddying systems can also be beneficial in order to develop and disseminate expertise across the institution and student and staff champions can be effective supporters of this change. Systems for pedagogical reflection, such as peer review and routes for teaching led institutional promotion and recognition encourage grassroots professional development and endorse change.

Pedagogy should be the key driver of innovation and development (Rourke and Coleman, 2011), but there is also a need to develop digital capability and literacy so that staff and students can make best use of new interactive learning environments. Research by JISC (2016) shows that the level of confidence that the academic has in using technology will significantly impact on the student experience of technology-enabled pedagogies. Equally though, students need to have the digital capability to effectively engage with active learning approaches.

There is currently much discussion about the new generations of students, who are characterized as having shared experiences in their formative years through the processes of globalization and the Internet age (DeVaney, 2015). The theory of digital natives supports the assumption that the Generation Z cohort are immersed in the use of technology and that it underpins their lifestyle and daily activities. Although the theory assumes that this broad cohort of individuals are digital natives (Prensky, 2001), more recent research would suggest that the reality is more complex than this and that there are a diverse range of digital capabilities within cohorts and the ability to use technology for different purposes is related in part to more individual contexts (Unpublished Doctoral Study). Thus if a change process for active learning is to be successful, attention should be paid to development of both teacher and student capabilities.

According to Moore et al (2007) the use of adult learning practices should underpin the process for cultural change in learning space development and utilisation. Reflective and reflexive learning is important for the development of both personal and professional knowledge and an empowered sense of self with the ability to act and influence a situation is developed through the situational processes of practice experience. Reflexive learning refers to the assimilation of knowledge through reflection with existing personal knowledge and is an important stage of professional knowledge development and the cycle of experiential understanding. This can be facilitated in a change management process by providing spaces for academics and learners to experiment with new technologies and pedagogies to give them a situated learning experience in a context of trust where people can fail without consequences.

The Learning and Teaching Test Environment (LaTTE) at Wolverhampton University is a good example of an experimental learning room with cross-University collaboration to test and research new approaches to learning and teaching. Similarly, students and staff at the University of Jyväskylä in Finland have co-created a multi-purpose learning space to promote pedagogical experimentation and a culture of creativity.

“All user groups and stakeholders were involved in the 5 days intensive and very creative co-design process, charrette, in order to create a shared vision and ownership to the new learning space. First impressions of the users highlight that there really was an urge for this kind of informal multipurpose facilities at the campus area’ or New learning hub aims at breaking boundaries in many levels: between disciplines, between students and teachers and between formal and informal teaching and learning.” (RYM Oy, University of Jyväskylä)

There is much discussion in the literature about barriers and staff resistance to change. This is related to time, confidence and lack of training and continuing support as discussed above (Brownwell and Tanner, 2012). Positive incentives can also be effective in engaging staff with the development of innovative pedagogies within student centred active learning environments. There are measurable

improvements in staff motivation when using active learning pedagogies (Hamdan et al., 2013) and the improvements in student engagement and attainment discussed above also provide extrinsic motivation. Incentives may also take the form of professional recognition schemes, such as staff awards and promotional routes related to teaching excellence.

In conclusion, there are key drivers in current UK higher education, which are changing student expectations and learning needs as well as the relationship between academics and students. This provides a compelling context for the development and adoption of new pedagogies such as active learning, mediated through appropriate learning spaces to enhance the student experience. Whilst there are currently a number of examples of innovative and effective practice (Davies, et al. 2017), whole-scale institutional and sector wide practice requires a transformational change process, with clear leadership and strategy to change the culture of learning and teaching in Universities and colleges.

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