

ACTIVE LEARNING SPACES

'Active' and participative learning and spaces that facilitate this, are at the heart of the L & T Strategy. An Active Learning Space (ALS) or Active Learning Environment (ALE) is simply a space that facilitates, much more readily than traditional spaces, active learning and participative learning amongst and between students, and between the students and staff. They take many different forms, and in some the emphasis is on the use of technology as an agent of this active approach, whilst in some the emphasis is on the layout of the room and the kind of furniture and AV equipment provided, with the emphasis on high levels of 'flexibility'.

The model below articulates the value of an alternative approach to space design (see Peberdy, D., (2014) *Active Learning Spaces and Technology. Advances in Higher & Further Education* (DroitwichNet)). It encapsulate the kind of 'inputs' we will need to consider when developing future active learning spaces and the kind of 'benefits' these will drive for students, staff and the institution.



Active Learning Spaces

Peberdy, D., (2014) *Active Learning Spaces and Technology. Advances in Higher & Further Education* (DroitwichNet).

An ALE or ALS can take the form of a seminar room, a workshop space or even a Lecture Theatre. Loughborough University has recently redesigned some of its LTs to be Active Learning Spaces. The Lecture Theatre (see below) was reduced in capacity by 20% compared to the previous (rigid tier) layout. But Loughborough students and staff like it so much they are building more. Queens in Belfast are also adopting the same multi-functional LTs.

Some feedback from Loughborough:

- *"Opportunities provided by the room have challenges the way in which staff conduct their teaching.... Future designs will require more circulation space and better storage for coats and bags".*
- *"When students enter this room they see a different kind of facility which creates an expectation that the learning and teaching they will experience will be of a very high quality"*
- *"The seating arrangement avoids the need for 'break-out space' and provides an excellent environment for informal learning. This reduces the total space requirements for teaching and collaborative active social learning whilst providing an*

asset that is likely to be in constant use. The design's simplicity and flexibility have proved extremely popular with users"



Loughborough ALS Lecture Theatre

Interesting developments around Active Learning Spaces are now in train across the global HE sector. For example, in the USA over **200** universities and colleges have adopted '**active learning initiatives**', many of which include developing new learning environments that enable students to work collaboratively, in small teams, in a single space. An excellent example is the **SCALE-UP** project at North Carolina State University. The primary goal of the Student-Centred Active Learning Environment for Undergraduate Programs (SCALE-UP) Project is to establish a highly collaborative, hands-on, computer-rich, interactive learning environment for large-enrolment courses. New spaces were designed (primarily for delivery of 1st year physics programmes) which feature a collaborative 'hands-on' IT-rich environment where students are set tasks in lecture sessions that actively engage them in finding solutions. Research into SCALE-UP has demonstrated that:

"it improves problem-solving and conceptual understanding. It also generates more positive attitudes and failure rates are drastically reduced, especially for women and members of minority groups. 'At risk' students also do better".

The SCALE-UP website can be found at: <http://www.ncsu.edu/per/scaleup.html> More than 50 colleges and universities across the US have adapted the SCALE-UP approach to their own institutions. An example of the kind of space used at NCSU is shown below – notice the 'Podium' is NOT the focus of attention....

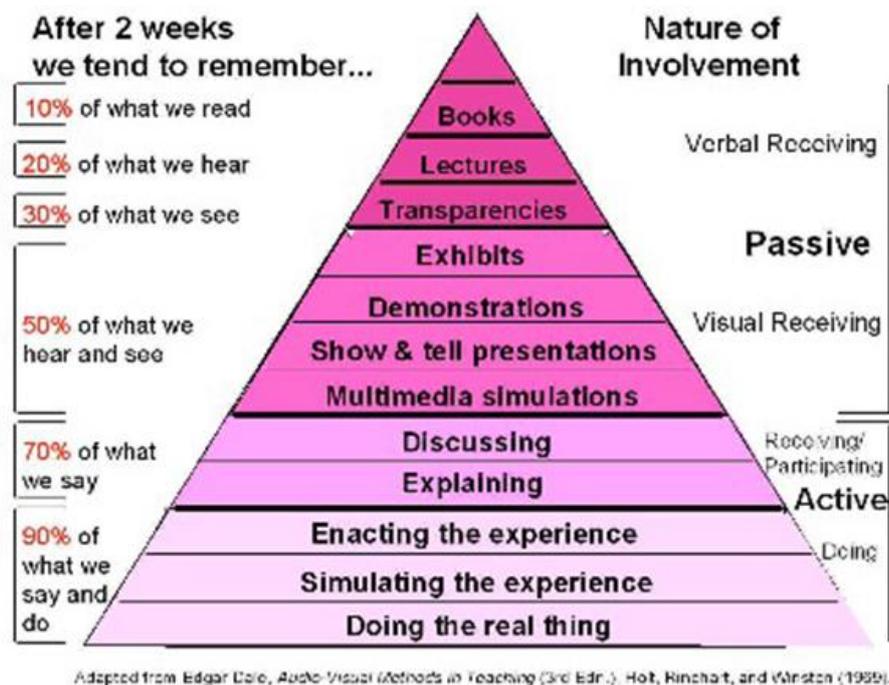


Active Learning Space NCSU

Source: <http://www.ncsu.edu/per/scaleup.html>

I have also attached a couple of relatively brief articles by colleagues from NCSU which summarises the origins, development and impact of the SCALE-UP project – it makes interesting reading – and some lessons for us all to take on board.

I think we should also share, much more widely, the simple adapted version of Maslow's Hierarchy of Needs pasted below, which says it all really – Active Learning is the key to profound, deep learning that sticks with us.



Active Learning Case Studies

University of Minnesota

The University developed 17 Active Learning Classrooms (ALCs), and has spent past 5 years monitoring their use. The ALCs include a 360 degree class surface marker, multiple flat panel display systems, round tables that accommodate 9 students, and a central teaching station. They compared teaching same subject in a traditional space with use of ALCs, and found that ALCs generated a totally different dynamic, with much more discussion and less time with tutor at the 'podium'. Students and staff have rated the ALCs much more highly for engagement, enrichment, flexibility, effective use, and course-room 'fit'. Student using the ALCs actually exceeded their predicted course grades. Better space = better teaching = improved learning. ALCs offer:

- Co-operative learning environments that encourage student collaboration and peer teaching.
- Technology that allows students to easily present work for review by peers and instructors.
- Furniture designed to facilitate small-group work.
- The ability for instructors to interactively coach students during activities
- New options for student interaction and class structure.

More than 85 percent of students surveyed recommend this space for their other classes.

A copy of the Evaluation of the 'Pilot' of the ALCs is available from:

https://www.classroom.umn.edu/projects/alc_report_final.pdf

A few quotes from users:

"I loved it. I can't imagine teaching in a different place".

"It was just special - a wonderful class - a wonderful experience."

"The round tables—the fact that they are looking at each other instantly changes their relationship with each other. That's the main thing the room does; it changes the relationship that faculty have with students and the relationship that students have with one another."

"I love this space! It makes me feel appreciated as a student, and I feel intellectually invigorated when I work and learn in it."



Active Learning Classrooms (ALCs) at Minnesota

Innovation at Winona State University

An interesting combination of new furniture, hardware and software in an integrated approach to developing group-learning.

Tidebreak (furniture provider) worked with WSU to develop a solution to facilitating groupwork for PBL purposes. This involved development of curved group study tables with integrated flat-screens. Software installed included ClassSpotPBL which combined interactive capabilities with small team collaboration.

It enables all student laptops or tablets to automatically connect to the large monitor, so everyone can see same info or different info (as required).

An experienced HE lecturer noted:

“In my 20 years as a teacher this is the biggest change I have seen. I’ll never teach the same way again.... Now we have an environment where students and teachers actively work together to solve problems and master the curriculum. The students are much more engaged in the learning process”.

Students who have used this space have constantly tried to get more class time to take advantage of ClassSportPBL. **The classroom is booked 100% of the time – by people who WANT to use it because of what is enables.**



Screen-sharing software enables cross-disciplinary student projects at Winona State University.

University of Tokyo

The Komaba Active Learning Studio (KALS) was established in Building 17 in May 2007, as a model classroom that puts the 'Ideal Liberal Arts Education' vision of the University of Tokyo into practice. The studio is designed as a classroom to support active learning - namely, the process of assimilating, analysing and assessing various inputs such as information or visual data, and then producing outputs in the form of writing or discussion. Equipped with state-of-the-art information communication technology, Wireless projectors can project different images onto four screens at the same time, and four different images can be shown on each screen, so up to sixteen students can display their work simultaneously.



The Komaba Active Learning Studio (KALS)