**Spaces for Knowledge Generation**

**Matt Riddle:** Hi, I’m Matt Riddle from the Spaces for Knowledge Generation project, which was funded by the ALTC to develop a framework for the design of learning spaces for the future. The SKG project was a joint initiative between La Trobe University, Charles Sturt University, Kneeler Deign Architects, and Apple.

The project posed questions about the ideal learning environments for students of today and tomorrow such as how designs for learning spaces accommodate the learning needs and perspectives of students themselves and the different technologies that students prefer to use.

One of the outcomes of our research was the idea of a knowledge generation aesthetic - a notion about space and ways of approaching it that encourages learning and contributes to knowledge.

This is the La Trobe learning room – a space we’ve reconfigured using the design principles that make up the SKG project. Before we go into further detail, perhaps now would be a good time to explain how we reached this point.

Traditional learning space design has been teacher-centred – the large lecture theatre. We wanted to explore learning spaces based on a constructivist theory of education – one which accepts that learners generate meaning out of their own actions and experience. At Harvard University, we visited learning areas that had been re-vamped to be student-centered, while respecting the needs of the professors at the university. We called this ‘the chalk-to-plasma continuum’.

This classroom has incorporated traditional teaching methods with high-tech advances. Notice the wires supporting the technology have been discreetly embedded into the wall below the blackboard. This nanotechnology lab at Harvard also combines old with new – soft textures with ultra high-tech equipment – to create a visually stimulating yet tranquil space for learning.

The Stata Centre is an exciting building at MIT that was built with the needs of students in mind. Notice how power points have been built into the furniture in this major thoroughfare so that students can recharge their laptops while they work. Known as ‘Student Street,’ it also provides seating arrangements for students and staff alike as well as meeting spaces which students can book, a gymnasium, childcare, and food outlets.

On our project study tour, we interviewed people who were involved in designed the spaces at the institutions we visited. We were particularly interested in how they were designing information study spaces as we knew students will make use of whatever space is available to study.

While we found many interesting examples of what we came to call ‘the SKG aesthetic,’ Robert Smith summed up perhaps the most useful finding.

**Robert Smith:** The centre of our interest there is the user – it’s the teacher. That’s the irreplaceable element. We can bring just about any technology into a classroom, we can provide different software tools in just about any classroom, but the one irreplaceable element in that classroom is the teacher.

**Matt Riddle:** On our return to Australia we held forums with students and staff to share our findings. Highlights of the forums have been posted on our website. The primary outcome of the research was the development of the design principles, which we gave the acronym ‘CAFEBAR’ (Comfort, Aesthetics, Flow, Equity, Blending, Affordances, Repurposing). But for now, I would like to show how we applied the principles in the La Trobe Learning Room.

We found that students are more inclined to engage in the learning process if they’re comfortable. I’m sitting on a chair that’s very comfortable because it’s supporting and flexible. All the furniture in here can easily be moved around the room. For us, aesthetics refer to the overall state generated by good learning space design. For example, taking advantage of the natural scenery on the grounds of a university campus and the way the furniture, fittings and space work together in this environment.

The design of a learning space can facilitate the total engagement of the mind, inspiring learners and creating a state of mind that allows ideas to flow. Flexible furniture can allow a room to be quickly reconfigured to suit the needs of a classroom. Everything is done to avoid disruption to learning moments.

Equity is included as a principle because the ideal classroom allows everyone to participate. For example, wheelchair accessible entries, allowing sightlines so every student can see every other student during a class, and furniture heights that allow maximum involvement from all students.

Learning spaces today must also allow the effortless blending of technology with face-to-face learning. Affordances are another principle demonstrated by access to technology such as laptops, electronic whiteboards, and blackboards – the chalk-to-plasma continuum.

The final principle of repurposing is demonstrated in this space being reconfigured from a common space, but it also refers to the design of learning spaces for multiple uses.

You’ll find more information about our design principles on the SKG website, where we also have podcasts of the key interviews we conducted on our study trip and excerpts from the workshops held in Australia. The website toolkit has a guide for building rooms like the La Trobe Learning Room. We hope you find the website useful when you set about reconfiguring your own learning spaces.