

Education:

Designing Spaces to Learn

an Insight by David Frost
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Thinking back to my own education in the 60s and 70s, I have few recollections of the learning environment that I occupied for twelve of my formative years.

The most vivid recollections are of the teachers who communicated using a “chalk and talk” delivery in a static teaching environment. Some teachers had a natural ability to connect with students, hold our attention and get their message across. The only technology at their disposal was the trusty overhead projector and the occasional TV presentation (who can forget watching Armstrong take that “giant leap for mankind” in 1969?)

The actual space in which we learnt was rectangular, had a fixed teaching position and just enough room for 30 desks and chairs. It was primarily designed as a static teaching environment without any flexibility to alter the layout of the room to cater for alternative teaching pedagogies. These spaces were rarely different to one another, so they failed to provide any identity for different classes. There was also limited ability to personalise classrooms to showcase the achievements of the students.

External spaces were generally narrow and intended to provide weather protection for access to classrooms. They were primarily circulation arteries which linked classrooms that were normally arranged in a linear configuration. The only other function of these covered areas was providing bag racks for students

Designing spaces to learn in the 21st century requires a thorough review of how students learn, in order to provide dynamic ways to assist teachers with the delivery of the curriculum. Gone are the days of the static classroom where the teacher’s delivery was dictated by the inflexibility of the room layout. Today, we strive to provide flexibility of spaces that allows for self learning, internet access, small group and project based assignments in addition to the traditional class format, plus the ability to open up classrooms for combining and altering class mixes. Spaces are no longer required to be rectangular. Irregular shaped rooms can assist with defining smaller areas for the variety of activities noted above, whilst still providing a general learning area. To accommodate this flexibility usually requires an increase in area of between 10% and 20% over the traditional classroom.



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Modern classrooms need to provide students with the potential to personalise their spaces. It is important for students to feel that they belong to a room and display their achievements for family and friends to view. Architects can assist with the personalisation process by providing each classroom with discernably different colours and finishes. The extent of pinboards should be maximized, and other features can be added to assist with displays, such as tensioned wires at high level for hanging displays.

Learning spaces should stimulate and engage students. The building itself can be used as a teaching tool. Using environmentally sustainable design principles can showcase to students the design principles in action. High-level windows located centrally in the room can provide passive cooling, natural lighting and minimise the need for air conditioning and artificial lighting. Rainwater can be collected in tanks and used for irrigating student projects. Other simple ways that spaces can assist learning are by noting height, lengths and sizes of building elements for students to relate to. The orientation of buildings can be shown by the inlay of compass points in floor finishes. Ceiling heights can be indicated on walls to assist students understanding of spacial sizes. Walls can include viewing panels to reveal the building structure and services that would otherwise be hidden. The classroom building itself can become part of the teaching curriculum.

Modern curriculums require the flexibility of outdoor learning environments. By grouping classrooms together in clusters, covered external spaces can be consolidated to provide useable outdoor teaching spaces. External storerooms and sinks can assist with a range of outside activities. The spaces can become squarer in shape to provide greater flexibility for the range of external activities.

By thinking “outside the box” architects can design spaces that engage students and provide a flexible teaching environment. This process requires close collaboration between the designer and the school, to ensure that spaces cater for the many ways in which modern curriculums are delivered. With the days of “chalk and talk” a distant memory, the challenge is to continue recognising the ever changing ways that our children learn, so that learning spaces can respond to and assist their development.

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