



HOW TO IMPROVE NEXT-GENERATION LEARNING SPACES TO DRIVE BETTER ROE

(Return On Experience)

The old 'six rows of seats and a chalkboard' approach to learning space design is rightly viewed as an antiquated one, long superseded by educationalists who want to create next generation learning spaces (NGLS) capable of unlocking the true potential of every student who uses them.

The quest to deliver superior learning spaces has seen a wide range of bold, visionary designs emerge, where the creative use of space combined with the proliferation of advanced educational technologies has formed something that is light years beyond the traditional classroom setup. However, despite the integration of interactive whiteboards, 3D pens and printers, AR/VR headsets, modular desks and seating, sustainable environmental controls and much more besides, not every learning space can expect all of its students to enjoy a revolutionary learning experience.

Increasingly, educational institutions are reporting difficulties with the learning spaces they have developed. Adjustment issues range from a lack of buy-in from senior leadership, to teachers and students not wanting or being able to successfully utilise the new design features. Looking deeper, these problems may arise from a preference for more traditional learning space setups, a lack of consultation or training, or even a lack of personalisation within the learning space, which therefore cannot allow staff and students to use the space how they want.

Ultimately, these issues lead towards a lack of ROE for the very people who the learning space is supposed to be specifically designed for. Without the right combination of the appropriate design elements, philosophy, physical systems and components, a learning space cannot deliver the experience that students deserve and good business dictates they should have.

NECESSARY DESIGN PRINCIPLES TO GUIDE SUCCESSFUL ROE IN NEXT GENERATION LEARNING SPACES

Personalisation: There is no one-size-fits-all approach to creating a learning space that will successfully ensure every student can exploit its resources to the fullest. Instead, the space itself must reflect the physical, mental, emotional and cultural needs of its staff and student body. Rather than trying to shoehorn in the latest design feature unthinkingly, it's far better to consider what would be a natural fit for the people who will use the space that's being developed. Open and honest communication between the facility's managers, the teaching staff and the students who will ultimately use the space is essential to getting this process right.

Learning exists beyond the classroom: Inspiration can strike anywhere, at any time. Learning space designers don't need to limit themselves to the traditional approach of housing lessons in a designated classroom space. Corridors can become learning walkways, stairs can be widened to become amphitheatres, reception areas can be turned into learning lounges. Every surface, from the roof to the surrounding grounds, can be successfully developed into fertile ground for study.

Personal technology must be supported: The advent of the internet and the proliferation of affordable personal tech means that we can learn anywhere. Successful designers are pushing the idea of set, predefined learning spaces even further into the past when they give students the means to utilise their own personal devices whenever and wherever they see fit. In practical terms, this means providing fast, reliable and comprehensive WiFi coverage across the whole of campus, alongside generous and numerous physical device support systems (charging stations, tech-friendly furniture, etc) as well as easy-to-access, easily navigable methods of allowing students to access all school networks, apps and software from their devices.

Be the change you want to see in your students: Sustainability is an increasingly critical factor in the design of any building, but particularly so for a school or university. In order to actively demonstrate the importance of sustainability and instil it as a priority in the next generation, such institutions need to integrate sustainability in their design. This can be achieved through the use of advanced environmental controls, clean energy usage, living walls and other prominent and easily-noticeable eco-friendly features spread across the campus.

5. Ibid

6. South China Morning Post, How 'China's MIT' Tsinghua University drives the country's tech ambitions, 06/05/2018

7. Ibid

8. GB Times, Apple to partner with Tsinghua University on advanced technology research centre, 26/03/2018

9. Cal Poly, Innovation Sandbox



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EXAMPLES OF LEARNING SPACES SUCCESSFULLY DRIVING ROE

NEXUS INTERNATIONAL SCHOOL: SINGAPORE

Designed as a 'city of the future', Nexus is a learning space dedicated to the idea of promoting collaboration, something that's built into the Innovation Hub at the heart of campus. Inline with Singapore's smart city vision, the school is a compact yet entirely flexible facility built around shared spaces and adaptable furniture which can be shaped to suit the changing needs of both teachers and students.

Sustainability is another core tenet of the Nexus' design philosophy, as it features various eco-friendly technologies including closed loop aquaponics, smart shading design and advanced rainwater management systems.

The Nexus is even open to the local community during weekends and out of school hours. This helps foster the sense of openness and collaboration that the school aims to instil in its students, by sharing their place of learning with their neighbours who are actively invited in.



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CAMBRIDGE SCHOOL OF CLINICAL MEDICINE: UNITED KINGDOM

Having not been refurbished since it was built in the 1970s, the Cambridge Clinical School building was definitely due an upgrade, and between 2016-2017 the university invested £3.2 million to completely revitalise the school and make it fit for purpose for the next generation of medical students.

After completing lengthy consultations with individual students as well as conducting canvassing surveys, exposure to more natural light came out as one of the top priorities for the refurbishment. This was achieved in key seminar rooms and common spaces through the use of glass panel walls. Other improvements include the integration of advanced e-learning suites and ICT equipment related to medical training and video recording, folded partition-based furniture for optimal flexibility, and a complete refitting of the library. The redesigned library features a variety of low, medium and high-intensity workspaces, modular furniture and an abundance of natural light.



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ISOM CLASSROOM



TSINGHUA UNIVERSITY: CHINA

Frequently referred to as “China’s MIT”, Tsinghua has continually dedicated itself to remaining a haven for innovation in both learning and business. From 2014-2017, the university produced 192 founders of start-up companies, a feat made possible in part due its development of learning spaces in partnership with highly respected designers and solution providers.

Last year, Tsinghua University established an entirely bespoke institute of Artificial Intelligence (AI) which was designed to be an essential component in driving the creation of a domestic Chinese AI industry worth nearly \$150 billion over the next few years. Not only does the centre boast the latest in AI hardware and support equipment, it also allows students the opportunity to collaborate with tech titans from China and beyond. For example, plans are currently underway for the university to build a new research centre in collaboration with Apple, as announced by the company’s CEO Tim Cook in early 2018. At the announcement, Cook said: “China is no longer just producing things, but taking on a dream.”



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CAL POLY SAN LUIS OBISPO: UNITED STATES

A nationally-ranked university with a “Learn by Doing” philosophy, Cal Poly San Luis Obispo has experienced great success with its learning space, the ‘Innovation Sandbox’. This space features an extremely wide range of state-of-the-art technological equipment and educational programs that allow students to formulate and thoroughly test their ideas within a collaborative workspace. Including the latest AR/VR headsets and advanced 3D printers, the Innovation Sandbox is designed to be a prototyping hothouse that allows students to be bold, freely make mistakes and really get to grips with the process of turning their ideas into reality.



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HOW DO WE KEEP LEARNING SPACES RELEVANT AND EFFECTIVE?

In each of these examples, the institutions creating new and highly innovative learning spaces did so while adhering to a set of design principles that enabled them to ensure that their learning spaces would give their teachers and students what they needed in the immediate future, while remaining sufficiently flexible to adopt future changes and innovations. When taking the following considerations into account, it's possible to optimise ROE in any learning space regardless of its size, expense, location or intended audience:

Consult the end users: While plenty of designs look great on paper, teachers need to be able to teach and students need to be able to learn. Always consider the needs and preferences of both groups in any design decision and let them guide the final outcome.

Collaborate with the wider world: Whether they welcome in the local community or forge specific partnerships with respected private companies and public institutions, schools and universities following a learning space approach aim to bridge the gap between education and the wider world. By exposing students to post-education opportunities early on, they help prepare them for the next important step in their lifelong journey. In terms of delivering long-term ROE, this is an essential element of any learning space.

Continually re-evaluate: In order to remain effective, learning spaces cannot rest on their laurels and need to keep up with international best practice. Even owners of the most advanced learning spaces must keep a weather eye open to the potential impact of new technologies, design elements, software and networking tools, any innovation that may fit into their existing learning spaces setup and improve its functionality.

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5th Annual
**NEXT GENERATION
LEARNING
SPACES** 27-28 AUGUST 2019
SINGAPORE

**ACHIEVING GREATER ROE IN LEARNING & TEACHING WITH
NEW GENERATION'S PEDAGOGY, SPACE AND TECHNOLOGY**



The majority of education institutes are creating innovative learning spaces to drive better engagement with the learners. They have invested in campus design, technologies, furniture and varieties of pedagogy to cultivate the learning spaces that maximize learning outcomes and prepare students to be college and career ready.

To discover more the 5th Annual Next Generations Learning Spaces is a platform for education peers (Higher Education & Universities, K-12 International Schools) who are leading their learning spaces projects to explore some innovative ways to redesign and revamp the learning spaces effectively and efficiently.

KEY SPEAKERS INCLUDE:



Dr Richard E. Bakken
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