



## Designing Schools for the 21<sup>st</sup> Century by Vincent Ciccarelli, AIA, Leed AP

Are you “old school” when it comes to the design of today’s educational environments? That may not be a good thing. Many of today’s “new” schools bear a striking resemblance in their design to the buildings of the post World War II era. In these schools, influenced by the concepts of mass production, students were efficiently sorted by educational level (and often gender) and organized into classrooms where they learned by rote. They sat in neat rows of desks facing a lecturer, preparing for jobs that they often kept for the rest of their lives.<sup>1</sup> This educational paradigm starts with the assumption that a pre-determined number of students will all learn the same thing, at the same time, from the same person, in the same way, in the same place each day.<sup>2</sup>

However, today’s information age and today’s students are very different. They celebrate diversity rather than seek to create equity, they recognize different types of intelligences and learning styles, they value higher order thinking skills over rote memorization and are used to multitasking and visually stimulating environments. Today’s educational environments should embrace these new realities.

Good design can support the desired behaviors of people who inhabit the space. Several key concepts in achieving this include developing spaces that accommodate each student’s individual learning intelligence, personalizing the school and integrating it into the community, allowing for adaptability and flexibility of use in the various spaces, and creating a stimulating learning environment.

### *Accommodate a variety of learning styles*

Students all learn in different ways. Today’s schools should provide ample opportunities for students to find the type of instruction that they are most responsive to. These might include spaces for independent study, peer tutoring, small group collaborations, one-on-one instruction, lectures and project based learning. The school should provide both formal and informal spaces for students to gather.



<sup>1</sup> Bergsafel, Best, Cushman, McConachie, Saur & Stephen, “Architecture for Achievement”, p49-50.

<sup>2</sup> Prakash Nair & Randall Fielding, “The Language of School Design”, p17.

Breaking the “Old School” Paradigm  
 July 22, 2009

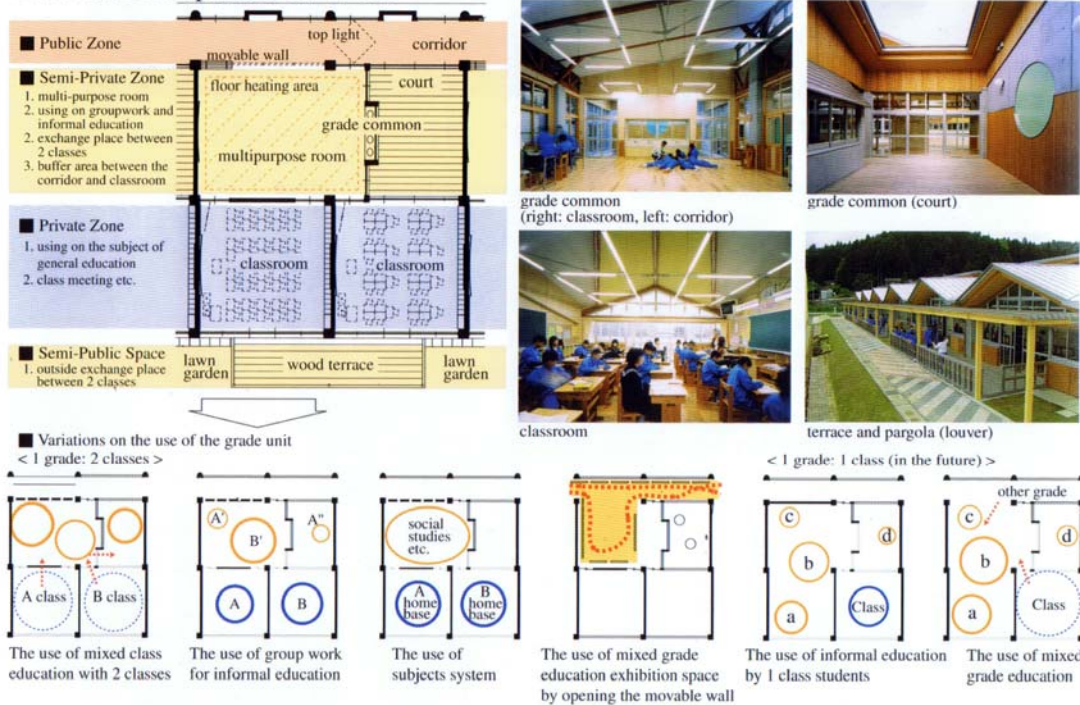
*Flexibility*

Spaces within schools need to be adaptable to accommodate the different learning modalities. Each space should allow for a variety of furniture arrangements to accommodate a range of uses. Moveable furniture and wardrobe units can be used in lieu of fixed casework. Students can use mobile or portable computers in lieu of fixed workstations. HVAC and lighting systems should allow for individual controls in each space so that they can be adjusted for each use. Utilities should be installed so as to facilitate the future reconfiguring of spaces.



Lecture, group and individual learning spaces at Harbor City International School, Duluth, Minnesota, USA. Architect: Scalzo Architects, Ltd.

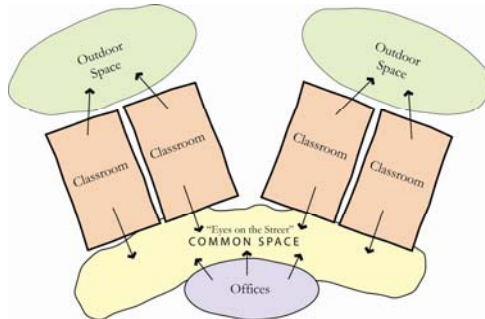
Grade Unit Concept And How To Use



Flexible groupings for grade unit. Shitara Middle School, Shitara Town, Japan. Architect: Akihiko Watanabe/ITO Architects & Engineers Inc.

### *Transparency*

Vibrant and energetic spaces stimulate student’s interest in the world around them and in learning. They “put learning on display”. Daylight fills the interior spaces and keep students alert. There are visual and physical connections to the outdoors. Students feel more welcome to approach teachers because adult workspaces are visible. The school becomes a safer place since people can view most of what goes on within it.



Interior transparency at Bexley Academy, UK

### *Personalization*

Good schools should be intimately connected to their place and culture. They avoid the sense of “mass production”. Schools whose designs reflect the communities that they serve are better rooted to those communities. They help to create a sense of civic pride and a belief in the importance of learning<sup>3</sup>. Adolescents are constantly striving to discover and express their own individuality. Allowing students to help customize their own school helps to engage the students and nurtures their development. Student projects and art work is displayed prominently throughout.

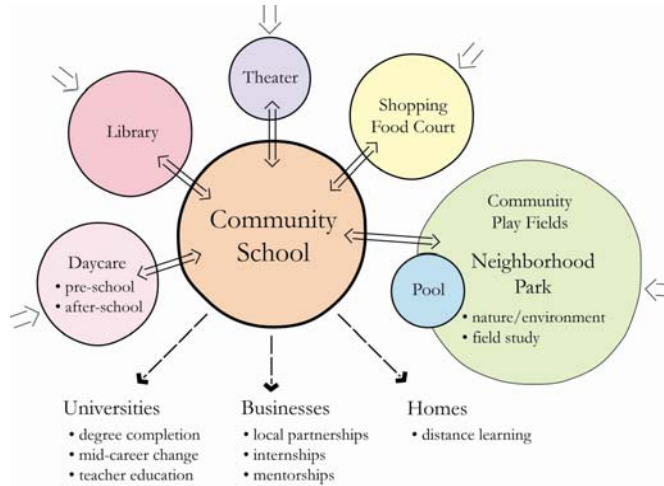


Mural in main school entry with student photographs. Bexley Academy, London, UK. Architect: Foster + Partners

<sup>3</sup> Bergsafel, Best, Cushman, McConachie, Saur & Stephen, p49.



*Shared Use*



Today’s schools are community schools. They often share resources with the community outside of school hours, including classrooms, athletic facilities, dining facilities and theaters. A school can allow facilities on its property to be shared with the larger community and/or take advantage of local off campus amenities available to it. They can send their students out into

the adult world through mentorships, apprenticeships and field study. This interaction helps to forge strong bonds with others and brings people together.

Today’s students need to learn how to think creatively, communicate well, build a strong, ethical identity and integrate with the local and global community. Like a well designed tool, innovative schools can be a catalyst for stimulating student development and improving their performance. By asking why schools look the way they do and how best to design the school building to support a modern educational curriculum, we can begin to bridge the gap between today’s student’s and current school design to create new 21<sup>st</sup> century schools.