

Renovating the 1960s School to the 2010 School Model

By Christian E. Helgesen

Fast-forward fifty years (from the 1960s) to 2010, and the question becomes, why should we consider renovating the 1960s school era buildings, especially if they maybe lacking culturally, economically and technologically from the present? Isn't it easier to create the 2010 school model as a new facility and build what is needed from the ground up? The answer in a perfect world might be "yes," but we don't live in a perfect world. The cost for building a new school is generally several times more expensive than renovation and the ability to find new land within an established community and outfit that land with new infrastructure only increases the tax burden of its citizens.

A span of fifty years is the time period measured from 1960 to 2010. This also just happens to correlate to the life expectancy of many school buildings before a major renovation or a major replacement is at hand if the

facility is to continue to serve the needs of the community. Architects usually talk about the fifty-year old building as having reached its life cycle period, before it must be improved upon, reinvented or simply replaced. It is within that span of

fifty years that societies also tend to move forward culturally, economically and technologically. We live in an age where philosophically we continue to believe that these advances will make our lives better, but there's no doubt that these new





JFK Middle School, Gallup, New Mexico
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strides come with a price in terms of new issues to solve. So it is with moving from the design of the 1960s school to the 2010 school model.

The 1960s School Model

Looking back on educational designs of the 1960s can in some ways be nostalgic, since we may think of that period when teaching was somehow simple and less complex. A classroom typically measured 30 feet by 30 feet, which was a derivative of the original “single room schoolhouse”. Here students sat in straight rows, and their books were neatly stored in their open-faced desks. Children were focused on the teacher at the front of the classroom and the lack of discipline was not the norm. Issues of student security or the lock down of classrooms would be concerns fifty years into the future.

1960s Cultural | Limited Specialization

Culturally speaking, the 1960s saw the majority of students coming from two parent households. Promoting and speaking English was the predominant language in most communities, and specialized classroom teaching was generally limited to the most academically gifted of students.

1960s Economics | Cheap Energy

Economically, thirty-two cents in 1960 could buy on average a gallon of gasoline for the family car, and the word on the street was “energy is abundant and cheap”. The term “going green” was in no one’s vocabulary, and a single pane of glass was plenty to keep the heat and cold out of the building. The hallmarks of the 1960s

school design, while serving their era respectfully, came equipped with limited energy saving features in the building’s envelope of wall, ceiling and floor. In fact there was probably very little insulation at all, especially depending upon the local harshness of the climate.

In some cases only small amounts of natural lighting was prevalent in the school’s design vernacular, as walls of glass were thought to be a distraction for the students. Windows were not prized for their ability to provide natural lighting, or for maintaining an individual’s well being.

1960s Technology | Telephone, Television

Technology in the 1960s was generally defined by the telephone and the television. Showing visual images in the classroom took its cue

from Hollywood with a movie projector and a floor-mounted screen. Instant communications meant using the telephone connected by a coiling wire to the wall. There was very little built-in technology except for maybe the infrastructure of a fire alarm, an intercom and the classroom bell.

The 2010 School Model

Fast-forward fifty years to 2010, and the question becomes, why should we consider renovating the 1960s school era buildings, especially if they maybe lacking culturally, economically and technologically from the present? Isn’t it easier to create the 2010 school model as a new facility and build what is needed from the ground up? The answer in a perfect world might be “yes”, but we don’t live in a perfect world. The cost for building a new school is generally several times more expensive than renovation and the ability to find new land within an established community and outfit that land with new infrastructure only increases the tax burden of its citizens.

What about removing the old school and rebuilding the 2010 model on the same plot of land? Well, unless the community plans on busing the students to another school during the construction period, most municipalities must keep the population on site to avoid over crowding the neighboring schoolhouses. The teaching of students cannot be curtailed or delayed for the building process, and in most cases there is not enough room to keep the old school in operation if the new school is under construction next door.

More importantly, renovating the 1960s school can be a form of our self-preservation of history and a self-continuity, since the neighborhood school building is looked upon as a hub for the community. Not only is learning taking place here, but also the collective events from sports to social debates have a home at the local schoolhouse. The

very fabric of our civic duties is evoked in our association with the school.

Many of the 1960s school buildings are also still built rock solid in terms of durable exterior and interior finish materials that in today's costs would be prohibitively expensive to buy and install. For instance, the use of hard terrazzo flooring or glazed masonry block for interior walls is highly prized for their ability to take a beating at the hands of students and still keep looking new.

2010 Cultural | Mandated Classrooms

Culturally, 2010 brings the education system an influx of single parent households in addition to a new lower discipline level for children. Both the State and Federal Government now heavily mandate new specialized teaching for various learning levels and bilingual needs for children's education that must be integrated into the curriculum. Fortunately, this generally requires only a reprogramming of spaces within the existing building footprint or the need for a smaller addition to the building that is less costly than completely starting over.

New teaching environments where the teacher becomes a participant in the learning process also facilitates a rearranging of spaces for a smaller student population per classroom. The 1960s static designed classroom no longer has to be of a rectangular shape, but provides the starting point in the sharing of a common adjacent space for increased student team interaction.

2010 Economics | Conserving Energy

Economically 2010 brings a new emphasis on the "High Performance Envelope" of the building, which is really another way of wrapping the building in a thicker coat; especially since the maintaining and operating of the school is the primary consuming factor of a municipality's yearly

budget. Increasing the wall and ceiling insulation, adding a reflective roof system, and replacing the single pane glass with new low-E high insulated glazing, the school building's outer envelope now conserves the energy that is pumped within its walls.

Modernizing the school's power plant from its 1960s variants of oil and electric fired units to energy efficient systems can also reduce the building's operating cost. Upgrading to a geo-thermal system that utilizes the surrounding earth for its energy source is gaining wide acceptance. Adding solar arrays of photovoltaic cells, or solar panels provides a continual source of energy in addition to

being a teaching tool and an on-site environmental classroom for displaying renewable resources. Adapting LEED existing building certification standards promotes an energy conscious awareness.

The incorporation of natural day lighting techniques through increased areas of new window openings, roof clerestories or skylights can bring in much needed light for the student's well being within the classrooms and common spaces. Taking the step to replace the original 1960s glowing blue fluorescent light bulbs with new natural light balancing fixtures and illumination motion sensors that switch lights on and off automatically can



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produce energy savings that quickly pay for their installment.

2010 Technology | Computers, Internet, Security

Technological advances in the past fifty years have ushered in the microcomputer, the Internet, the cellular telephone, and now the freedom of wireless connectivity. These technologies alone are commanding new ideas in teaching models for today's generation of students. For example "technology based learning" emphasizes the continual use of an individual laptop for each child within the classroom. This allows students to become computer literate quickly and more proficiently than if the computer is brought out and used on a part time basis in a specialized computer lab.

The freedom of new wireless technology also adds freedom to the classroom, eliminating the need for the former infrastructure of hard-wiring multiple cables in the wall. A design emphasis on installing

robust wireless networks from the start prevents these systems from slowing down during times of increased student computer access.

The Internet transforms the 1960s school building to reach beyond its physical foundations for accessing knowledge from anywhere around the world. Today's students interacting real time through "Face Book" or "My Space" is the modern derivative of the former lost art of writing to a pen pal.

Unfortunately, an increased awareness of security for students from both real and cyber predators plays a large role in the 2010 school model. New security measures take the form of on-site surveillance, and active and passive student identification badges. In short, the need for student supervision has dramatically increased in the 2010 model.

Beyond 2010 | The Next 50 Years

The 2010 school model with its updated cultural, economic and technology footprint has the ability to extend the life of the 1960s school

design. These 2010 demands, although not minimal, can also preserve the historical nature of past educational facilities and do it in a less costly fashion than building new from the ground up. The 2010 model can truly reach around the world overlaid within the shell of the 1960s building, where optimistically the next fifty years will only increase the capability to learn ever so much faster and more dynamically. ■

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