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A Habitat for 21st Century Learning

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New school designs in Peoria, Illinois, support 21st century education from the ground up.

Excitement reigned as teachers returning from in-service training talked about planning an integrated exploration across disciplines. Then they stepped into a classroom crammed with desks. Enthusiasm quickly dissipated. Where could they do projects? Where could two classes come together? Where would they save ongoing work, or display ideas, or create presentations? How would small groups be able to hear in the same space? One teacher sighed, "This classroom is just like those my father sat in! They tell us to teach 21st century skills, but the space we teach in is rooted in the past."

This experience is all too common when educators attempt to focus on 21st century skills. Today's graduates will likely spend time in a workplace where they will multitask, work on interdisciplinary teams, collaborate with consultants near and far, deal with disparate and conflicting information, and work with ever-changing technologies. Educators need to prepare students to thrive in that complex work environment; yet there is a marked contrast between that and the school environment we provide for them to "work" in today. Although technology enables learning anywhere, the school building is still the primary learning habitat for our students, the place where they interact with teachers, connect face-to-face with othe learners, and grow. Too often, that habitat does not support 21st century learning.

Opportunity Knocks

Four years ago, faced with replacing aging schools, Peoria Public Schools in Illinois chose not to build new traditional schools. Instead, the district seized the opportunity to research and create 21st century learning habitats that would revitalize both teaching and the surrounding economically challenged communities. More than 100 administrators, teachers community members, students, and parents worked together to determine the best design; they selected a community learning center model for the new schools, blending resources of the school *and* the community to benefit all.

Two of these schools, each serving children from birth through grade 8 and their families, will open in fall 2010. These community learning centers replace high-poverty schools — 89 percent of the students in one school and 94 percent of students in the other receive free or reduced-price lunch—with mobility rates of 44 percent.

The Glen Oak Community Learning Center will serve 750 children and include special classrooms designed for students with autism. Harrison Community Learning Center will serve 650 children and include bilingual classes and a talent development program. Harrison is adjacent to a low-income housing development that is also undergoing a major redevelopment.

Defining a 21st Century Learning Habitat

The school design committee identified the key attributes of the new Harrison and Glen Oak Community Learning Centers. These attributes include a continuity of education experience and services (birth through 8th grade); shared ownership and responsibility with community members and stakeholders; professional and adult learning communities; strong connection to the outdoor environment; sustainable building strategies; and around-the-clock use of resources.

Design attributes within the schools include space to support strong family partnerships; spaces that can be shared by multiple groups; a safe and secure, yet welcoming environment; physical flexibility in classrooms and other spaces; clustering of classrooms to create small learning communities; resources in close proximity; and flexible technology to allow changes in the future. Both schools follow the same basic design configuration.

Entering a 21st Century Habitat

Consideration of how the community will interact with the school habitat begins at the main entry. Designed to foster a feeling of welcome, safety, and security, the entry features a "community wall" with handprints from people of all ages from the school and community. A secure vestibule directs people to either the main office or a lobby where staff will greet and direct students and visitors alike. This entry leads to a main corridor with color-coded building zones separating the community areas from the academic areas. Each area can be isolated for evening or weekend use by the local community.

The academic habitats are organized into four age-appropriate learning communities, or "villages" of classrooms, creating a sense of community and belonging. Villages foster relationships among students, faculty, and professional learning communities. Each village includes dedicated teacher planning space, conference rooms, and storage. Flexible program classrooms and a language lab also accommodate appropriate learning experiences for English language learners, second language learners, and students with special education needs.

Flexible Academic Areas

The individual classroom habitats are noteworthy for a variety of reasons. The principal attribute is flexibility. At 1,000 to 1,200 square feet, these classrooms permit multiple arrangements of furniture and student groupings for individual and collaborative group work. Multipurpose, lightweight, ergonomically designed furniture can be quickly moved to encourage varied teaching strategies. In some cases, opening walls allow adjacent classrooms to combine to accommodate large-group instruction or team teaching. In-classroom bathrooms are provided for students through the 5th grade. Technology is integrated through both wired and wireless systems with wall-mounted interactive whiteboards.

Display areas for 2D, 3D, and electronic work are located inside and outside the classrooms. In one school, one classroom in each village is equipped with a special video screen that can be pulled down behind a large exterior window so that electronic media (videos, photos, PowerPoint presentations) can be projected outside to the local community. Student projects can also be shared with the community via the Web.

Situated between and easily accessible by two villages are Integrated Learning Areas (ILAs). These flexible ILAs will be used for such activities as art, cooking, and practicing life and gross motor skills. These large, resource-rich spaces are also available for conducting long-term investigations and storing ongoing or large-scale work. Along the side walls of the ILAs are two securable alcoves housing a kitchenette and an entire art studio with a sink, drying racks, and storage room for 3D work. Both of these ILAs bring additional resources within arm's reach for school-day instruction, after-school activities, and community meetings.

Connecting with Nature

Ideally, 21st century teaching and learning will enable students to develop a strong connection to nature. When gardens and nature areas are on-site, students learn to be environmental stewards. The designers collaborated with the Peoria Park District to plan green spaces for outdoor learning and shared community use. The Harrison Community Learning Center site will also include walking paths with labeled vegetation, bioswales with a variety of plants, classroom and community garden space, rain harvesting areas, an amphitheater for outdoor classes, and a variety of outdoor play areas.

Nature Explore outdoor classrooms, designed in cooperation with the National Arbor Day Foundation, provide well-designed outdoor space with areas for music and movement, nature art, building, and gardening. Other classroom design features include immediate outdoor access from each classroom; low, accessible windows for outdoor observation from the inside; and a central courtyard.

Room for the Community

A 21st century school also provides a teaching and learning habitat for adults and the community. The new designs include adult classrooms, informal and formal gathering places, and display areas to exhibit and celebrate the success of students and community members alike.

Following the principles and program components of Yale University's School of the 21st Century, each community learning center will have spaces for child care services as well as for other supports for parents (Henrich, Ginicola, & Finn-Stevenson, 2006). A community education suite includes an adult education classroom, a parent resource room and café, and offices.

In the parent café, parents will find soft seating, wireless access, library shelving for resources, and a full demonstration kitchen for nutrition classes and informal events for parents and members of the neighborhood child care providers network Office space is provided for early childhood education staff who make home visits, organize playgroups, and hold workshops. An early childhood classroom will serve as a model for providers and also as space for child care during parent classes and child care network meetings. A small health services area includes a reception area, a classroom, an office, and three exam rooms.

High-Quality Environment

A key ingredient for any 21st century habitat for teaching and learning is the creation of a healthy and sustainable environment. Aside from the operational savings, many sustainable design strategies also assist learning by maximizing sensory input for students. Providing superior daylight, air quality, thermal comfort, and acoustics can lead to increased academic performance (Kats, Perlman, & Jamadagni, 2005).

In Peoria, designers paid careful attention to placement and planning of the buildings for environmental quality. Generous windows bring daylight and views of the surrounding park-like landscape into learning spaces. Indirect/ direct light pendant fixtures reduce glare, and daylight sensors turn off lights when not needed to save energy. Natural and carefully selected materials are used throughout. Because carbon dioxide levels can reduce students' ability to concentrate, the buildings have energy-efficient sensors to increase fresh air when necessary. Acoustically efficient classroom surface materials and an audio enhancement system ensure that students can hear teacher voices.

Start Small

Not every school can be a new building; however, many schools can become better habitats for 21st century teaching and learning. A number of the ideas used in this school design process could be easily integrated and adapted to other sites: for example, technology that is accessible throughout the building, space set aside for project work, movable walls that make collaboration easier, ergonomic furniture, display areas for student work, and nature classrooms replacing blacktopped playgrounds. Implementing these changes gradually as budgets allow ensures better learning environments for students.

Spaces for teaching and learning don't have to be rooted in the past. As opportunities arise for repurposing or renovating school space, educators and the communities they serve should consider the kind of habitat teachers and students need. When that happens, we're more likely to truly teach 21st century skills.

References

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