

Making it Work: Designing Neighborhood Schools for the Entire Community

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The United States is at a pivotal point in the design and reconstruction of its school buildings. Planners can use this opportunity to advocate for safe, well-designed schools that serve the entire community.

The State of Our Schools

We are in a critical moment for school design and reconstruction. As of 2010, there were 132,200 schools within the U.S.. Of these 93,900 were public schools, that housed 55.5 million or nearly 90% of America's students (NCES 2010). Across schools, however, there is a need for nearly \$271 billion in repairs and maintenance; this is nearly \$2,745,527 in repairs for each district (Filardo 2011). School officials, and planners recognize the role that quality physical environments and community integration play in the learning and health of their students. Poor physical environments have negative effects on student and teacher health, detract from learning (Tanner & Lackney 2006), result in poor attendance rates, and teacher attrition (Filardo 2004).

Well-designed community based schools are a necessity for thriving communities and require collaboration between school officials, architects, planners, and the community. In those collaborative moments there is an opportunity not only to rehabilitate the classroom environment for the betterment of students, but also to design schools for the inclusion of all members of the community, the young, their parents and seniors.

Suburban communities are re-evaluating the need for expansive schools that contain autonomous libraries, recreational facilities, health care systems, and modes of transportation (Ring & Decker 1995). This is for good reason: Technology has made it possible to do more across the curriculum with less space (Curtis 2006), and students' inability to walk or bike to school, or access remote recreational facilities has contributed to increasing childhood and adult obesity rates (North 2013).

In spite of the record number of students that enrolled in public school during Fall 2012 and the anticipated increases in enrollment (NCES 2012), public schools in low-income communities are shutting their doors citing poor performance, decreasing enrollments, poor conditions and budgetary constraints (Layton 2013, AFT 2012). In the 2000-2001 school year 717 public schools closed; mostly in poor and minority communities. By the 2010-2011 school year this number increased to 1069 (NCES 2001, 2011, AFT 2012). School closure in underutilized and underperforming schools has not necessarily resulted in higher performance for students. In fact, cases where students moved to schools where school performance was only slightly better, resulted in adverse effects on test scores (Engberg et al., 2012). Another concern is the lack of services faced by disadvantaged communities when schools close. For many low-income and high risk communities the school serves as a place for night courses, ESL courses, computer access, and even health care.

A joint study by the 21st Century School Fund, Brookings Institute, and the Urban Institute (2008) found that investment in creating quality schools and better facilities in DC's public schools has the potential to reverse the trend of dropping enrollment, and attract young families as well as re-establish an economic base.

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Towards a Better School Design: Neighborhood and Community Schools Movement

Neighborhood Schools are schools which are physically located within the community and are within walking distance to the households they serve (Tanner & Lackney 2006). The community school movement focuses more on the school as a civic entity. The neighborhood and community school design movements espouse certain ideals that are translated into the physical environment:

- the school is a positive learning environment for all members of the community,
- community and school partnerships support the interests of the child and the broader interests of the community,
- schools are places of civic engagement,
- members of the community are educational resources (Tanner & Lackney 2006).

Community School design has multiplied in recent years, in part due to the establishment of a grant program, the 21st Century Community Learning Centers Fund. In 2000, over 3,600 schools and partnering organizations (nonprofits, local businesses, and postsecondary institutions) including 903 rural, inner city and suburban communities participated as CLC's. For more information on CLC grants:<http://www2.ed.gov/programs/21stcclc/index.html>

The Neighborhood and Community School movement provides a useful framework for considering the complex state of schools and the changing demographics of communities. Designing schools to allow access by community members is more than just an ideal, it ensures that the school is seen as a resource with tangible benefits worth preserving. **Schools, which had historically struggled to approve bonds, noted that after basing their schools on the community school design model they were able to justify raising taxes and pass school bonds more easily** (Tanner & Lackney 2006). This model includes: adult-sized gyms, auditoriums, adult education opportunities, branch libraries, after school child care, preschool, and child care programs that function during school hours.

Community schools support changing demographic trends.

Planners have a chance to tap into the benefits of the community school model to meet growing social trends: the aging baby boomer generation, the beleaguered sandwich generation, and the diversity of younger generations (Li and Long 2013). Using schools based within their communities as community centers can have a positive impact on multigenerational living by:

- Removing the need for the duplication of other services, and public buildings (OECD 1995),
- Providing an added health benefit of being able to walk, or bike to school (North 2013),
- Creating a positive impact on learning ability for children and health and emotional well-being of seniors (Li 2013),
- Creating strong social ties between school and community that support and improve education (Tanner & Lackey 2006).

Formal joint use agreements ensure the longevity and success of community schools. These agreements are often between a local government, community or business organizations and a school to use the school or a portion of the school after, before or during school hours to provide services to the community (see Issue Brief: Joint Use School Community Collaboration). An example would be allowing a local senior civics organization to use the cafeteria for community events.

The Role of the Planner

Rescuing our schools for the sake of children and their communities, imposes upon planners the need to become actively involved in the creation of safe, quality learning environments that integrate the entire community and that are flexible enough to accommodate changing demographics. Planners are in a pivotal position to do this.

A 2008 APA survey found 58% of all planners recognize schools as central to their communities. 43% are involved in planning to co-locate schools with parks, health facilities, recreational areas, community centers and libraries and 44% are helping to site new schools (Israel & Warner 2008).

The critical tools that planners bring to this task are the understanding of participatory processes and ensuring that community wants are reflected in the architectural design.

Collaborating with the Community, and the Architect

An inclusive design process can address the needs of each unique community. A participatory design process is especially important if the needs of the surrounding community are not usually considered in school design and joint use agreements. This might include healthcare or food delivery for seniors or child care or recreation programs for young children.

To address the challenge of designing for such a wide array of people, the community and school officials might use a charrette process in the early stages of design, such as the one used to design, Sonia Sotomayor High School where public meetings pointed to the multigenerational and unique needs of the community (see box).

Depending on the firm chosen to do the project, a charrette or common visioning exercise with community members and other invested parties may be a natural part in the early process of design. Ray C Bordwell, who works with Perkins + Will, a firm recognized as a leader in educational design, describes the collaborative exercises and workshops that lay the foundation for school designs.

"The process is a collaborative exercise taken over many weeks, involving several groups of users. It is designed to explore the future needs of the building... Our process combines a process-driven workshop to develop background information on the district's educational needs (an Ed Spec) with architectural programming that specifically defines spatial needs of the physical space.

During the workshops we explore new ideas of programme delivery and look to the administrators, staff, students, and community members to fuel innovation. The results of this phase are a clear definition of the types of spaces necessary. We address issues of sustainable design, technology integration, safety, and security...Combining these findings with a series of defined architectural parameters...we publish the final deliverable.

The 'Final Design Guideline,' unlike Ed Specs, closes the disconnection between the facility programming and the design architect's directive. The document is very graphic in its representation of information, so the visually thinking architect can make an immediate connection to the information. With this approach there are fewer misunderstandings" (quoted in Curtis 2003 pg. 67).

While the physical school facility is important, involving the community in the design process is about more than just establishing a physical building, it also helps to establish a lasting rapport between the school and the community (Tanner & Lackney 2006).

Case Studies

Crow Island Elementary:

Location: Winnetka, Illinois

Architect: Perkins + Will

Crow Island Elementary School is often cited as an archetype for school design because of its inclusion of community and the surrounding neighborhood. The creation of Crow Island Elementary school was brought into being over a long process with many different agents, the architects, planners, school officials, and teachers. The first principal of Crow Island Elementary School, describes the impact of working and teaching in a well-designed environment:

"I experienced the design of Crow Island in a way that not only supported, but even prompted certain leadership dispositions. Being in such a well-designed space day after day, year after year, actually enhanced my leadership. Not only was the space not fighting me, it facilitated what I knew how to do and inspired what I had not yet imagined how to do as a school leader. Let me give a few examples: A wide open entryway invited my principal's welcoming ritual of standing at the front door each morning; the scaled size served as a constant reminder of my leadership purpose - the children; the walls of windows invited the outdoors and the community; a metaphor depicting the need for transparent leadership thinking" (taken from an interview with DesignShare, 2012)



Crow Island Elementary School classrooms and outdoor space. Photo Credit: Perkins + Will

Key Physical Design Elements

Planners should advocate for the following characteristics when designing community schools: flexibility, safety, and the ability to accommodate across a wide spectrum of people.

Flexibility

Flexibility in community school design is just as important as the flexibility of any other public space. Due to the demands that might be placed on a school by the community, the space must accommodate changing technologies, a variety of plumbing and heating needs, and be able to be extended or contracted in floor space when needed (Curtis 2003). These issues have been addressed with solutions as variable as using movable partitions as walls to auditoriums that open out onto open green spaces and can become outdoor learning centers (Curtis 2003). When designing for community schools or joint use, a singular space can be used for a multitude of purposes but it is still important to have designated spaces since some functions will be using spaces in extremely disparate ways (Schneider 2010). Additionally, one must think outside of the box when it comes to the physical design, since the purposes the facility serves extend beyond the scope of a traditional school building. Unconventional uses require unconventional forms.



Brightly colored hallways can engage children and orient users..
Photo: Cesar Chavez Elementary.
R-Barc Architects

Accommodating

In designing a community school, especially one that houses both younger children and elders, the design of physical elements such as doors and handles, seating, hallways, lighting, and materials should all be carefully considered. Both younger children and seniors may have limited motor skills, and sensory abilities that are sensitive to the environment. While older populations may be experiencing a dampening of sensory skills and require brighter, or more pronounced sights, sounds, and textures, younger school aged children can benefit from the same environment where high contrast color and textures help to engage children in their environments.

Safety

Safety and security are of utmost concern in the design of schools, especially at the present time. Architects struggle to balance the desired feeling of openness in community schools with the need for security. There are a number of strategies community school designs can use to enhance security, access control, natural surveillance and definition of territory (Crowe 2000, Tanner & Lackney 2006). Most of these can be managed through well designed circulation routes, placements of entries, exits, and views outward, as well as hard barriers such as shrubs, and fences.

Hard barriers, and the placement of entries and exits help to address access control, or who has the permission to enter and exit and where. Most contemporary schools, only have one entry and one exit, or separate the entries for children from those of the community (Curtis 2003). In the case of multiple entrances these can still be secured by decentralizing the school building into different parts, rather than placing all functions in one school building. Hard barriers refer to design elements such as doors, shrubs, physical fences, and gates that are explicitly meant to keep unwanted users away, or those we are safeguarding in (Tanner & Lackney 2006).

Hallways and circulation routes do not have to be costly, cumbersome spaces that serve no other purpose than shuttling people back and forth to destinations. They can serve as nodes of positive interaction and deterrents to negative interactions. Paths can be designed as short segments with connecting activity nodes, or with windows and other openings placed to increase natural surveillance by administrators, staff, and the community (Tanner & Lackney 2006). Cesar Chavez Multicultural Academic Center in an urban part of Chicago places all classrooms in a single corridor with windows onto the schoolyard to supervise children and deter gang activity (Curtis 2003). To ensure there is adequate natural surveillance, the schoolyard is also placed parallel to houses on a community street (Curtis 2003).

Case Studies

Sonia Sotomayor High School/Central Regional High School #13
Location: Los Angeles, California
Architect: RTL



Learning Communities at Sonia Sotomayor High School.
Photo: Sotomayor High School, CEFPI

The Los Angeles Central Region #13 High School or Sonia Sotomayor High School is located in a transitioning part of Los Angeles that was once industrial but is becoming residential (CEFPI 2012). Architects met very early on with school officials, planners, and community members to identify key concerns (sustainability, security, and housing) and maintained contact with the community throughout the process. The result was a school that was built into five separate learning communities with all functions that would be used by the community (gymnasium, auditorium and library) facing the residential community and in easy to access spaces. The services provided: a performing arts center, library, and gymnasium, were meant to fill other voids in the community (CEFPI 2012). Additionally, provisions were made on the site for affordable senior housing (CEFPI 2012).

The community functions rest on the outside closest to the street and the parking lot, while the “learning communities” that house the school are separated into five separate areas broken up by outdoor spaces and are closest to the track. Each learning community has its own entry and exit which can be locked and is separate from the community entrances.

Collaborative Spaces



Seniors being instructed on using the Wii System. Photo: Central Regional High School, Eagle's Voice.

Siting multigenerational services within a school should be viewed as an extension of the curriculum. In addition to separate spaces for joint use, there are existing spaces where cross generational collaboration can strengthen learning: computer labs, libraries, school cafés and cafeterias using only small changes in design.

Students at Central Regional High School in Bayesville, NJ use their library setup, (where stacks are built into and along the wall rather than in the floor) for such events as teaching seniors in the community to play Wii (Miller & Duffont 2009). This is not only an opportunity for physical exercise for the seniors but an excellent opportunity to learn and engage with the elders in the students' community.

Case Studies
Glen Oak High School
Location: Canton Ohio



Multigenerational café at Glen Oak High school. Photo: Glen Oak High School, Canton, Ohio. Daily Press.

In Glen Oak High School, in Canton, Ohio the vision the school wanted to portray was one of a cohesive community center. This vision was transferred to the designers, who built Glen Oak with a 20,000 square foot public library, a proposed health care facility, and a multigenerational cafe. The cafe which is placed on a public piazza next to the public library, is manned by students and targeted towards seniors who were using the local McDonald's as a community center (Schneider 2010). This space not only serves as a communal place for the elders but also grants service and business skills to the students.

All school facilities are open to the community, as well as flex spaces which are able to transform to accommodate community meetings (Schneider 2010). The flex space, which is a space that is transected by moveable walls, can be very beneficial to other multigenerational uses such as senior civic organizations.

Through the addition of public services to the Glen Oak School, Canton, which historically had difficulty passing bonds for such projects, the district was able to garner support for the project as well as funding for various services offered within the school (Schneider 2010).

Case Studies
Stoddert Elementary
Location: Washington, DC

Stoddert Elementary is a refurbished elementary school serving the DC area. During the day it is a school, while at night it is fully open to the community for use (USGBC 2007). The garden, which was conceived of and maintained by two community members (Bruske 2010), uses a mix of elders in the community, parents and children to grow the garden and tend the schoolyard (Knealy 2012). The roof garden is used for lunch during the school day for students as well as community residents after hours. The school also has a multipurpose arts and rec room where civic meetings, after school care, and community use occur.

When school lunch programs serve after hours such as in Stoddert Elementary, they can provide congregate meal sites for seniors who are no longer able to drive, or don't have easy access to grocery stores.



Multi-purpose cafeteria serves students during the day and the community at night. Photo: Stoddert Elementary, D.C., United States Green Building Council.

Conclusion

Making it work

The siting of new schools, the refurbishing of older schools, and the fight to save closing schools presents a compelling call-to-action for planners. Planners can seize this opportunity to advocate for better learning environments for students and ensure that the surrounding community is consulted and their needs met through community schools. This complex yet critical task requires that planners be equipped to work with architects, educators, and community members to establish a physical environment that reflects the community's needs and values. It also requires awareness of the physical design aspects that can either support or dampen the use of the school as a vital community resource.

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