

# Multigenerational Schoolyards

## Capturing the Full Potential of Joint Use Agreements

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**Overview:** This paper explores the challenges and opportunities of designing multigenerational schoolyards to benefit people of all ages and abilities. As joint use agreements continue to grow and schoolyards get redesigned, it is essential that public officials capitalize on this opportunity to ensure the design is multigenerational and age inclusive.

### Obesity & Parks

Over the past thirty years, [obesity rates in the U.S. have skyrocketed](#) to epidemic proportions. To combat the epidemic and [its host of ill effects](#), public health advocates from a variety of fields and professions have turned their

**Public schools are the most abundant public facility in the U.S. Centrally located within communities, they are ideal targets for expanding recreational opportunities.**

attention to the physical environment and its [connection to physical activity and healthy lifestyles](#). Because access to recreational facilities such as parks, community centers, and playgrounds has been shown to lower the body mass index of children and increase physical activity among adults, [expanding parkland and recreational facilities is a topic of increasing](#)

[importance](#) (Allen et al, 2013; Godbey, 2010).

Yet the high costs associated with new parkland and recreational facility development is cost prohibitive for many communities.

### The Opportunity

In search of comparable yet less costly alternatives, public health advocates and allied professionals have turned their attention to the **most abundant public facility in the United States:** public schools. Nearly [100,000 public school buildings](#) dot the towns and cities of the United States, totaling **6.6 billion square feet of indoor space** and an additional **1 million acres of outdoor space** (Filardo et al, 2010; NCES, 2012). Most are centrally located within communities, making them ideal targets for expanding recreational opportunities. Yet their use is often restricted to K-12 students during set hours of the day and week, typically during school hours and sanctioned school events. Equipped with **alarming obesity statistics** and studies connecting the **lack of recreational facilities and physical activities** to obesity, public health advocates have made a push over the last decade to open many schools to the public.

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## Schoolyard Design Movements



Photo Credit: UGA Center for Urban Agriculture



Photo Credit: Boston Schoolyard Initiative



Photo Credit: Learning Landscapes



Photo Credit: Green Thumbs Growing Kids

- A. Wildlife Gardens:** Connects kids to the plants and animals they read about in class.
- B. Physical Fitness:** Encourages active movement and exercise.
- C. Learning Elements:** Connects schoolyard directly to classroom curriculum.
- D. Food Gardens:** Improves dietary habits and often includes cultural elements.

### Schoolyard Design Movement

Concurrent with the push for joint use is a [growing movement to transform schoolyards from their asphalt-centric, sterile state to dynamic venues](#) that encourage creative learning opportunities and active play (Danks, 2010). A growing body of research supports **a strong connection between schoolyard design and the quality of student education and student fitness**. These redesigns often incorporate elements of nature, ecology, and gardening to strengthen students' understanding of the natural sciences, while providing creative play structures that encourage exercise and help combat rising obesity rates. Public officials, health and education advocates, and nonprofits are partnering to improve the quality of schoolyards and engage school officials and the broader community on the topic of joint use and multigenerational design.

### The Difference Between Joint Use & Multigenerational Design

Joint use and multigenerational design are closely related but fundamentally distinct.

**Joint use occurs when a K-12 school shares its indoor or outdoor facilities with a "non-school" actor** (Allen et al. 2010). Although the intent of joint use is to open school facilities to the broader community, the space may not be designed to accommodate the diverse abilities and interests of the entire community.

**Multigenerational design occurs when a space is designed to enable people of all ages and abilities to utilize the space.** As joint use agreements continue to grow (Morken and Baran-Rees, 2012) and schoolyards get redesigned, it is essential that public officials capitalize on this opportunity to ensure the design is multigenerational and age inclusive.

***Just because a school is under a joint use agreement does not guarantee its facilities are accessible or desirable to the community.***

## Should My School Strive for a Multigenerational Design?

No two communities are alike. Communities have different needs depending on factors such as socioeconomic conditions, existing recreational infrastructure, age distribution, racial composition, and geographic location, to name just a few. Identifying the needs of the community through quantitative research and public outreach meetings is one way to determine if a joint use agreement and a multigenerational schoolyard would be beneficial. Sadly, research shows that low-income and minority communities are less likely to engage in joint use, setting up an odd but common paradox that has **those who need the resources most, end up getting the least** (Sprenghler, 2012).

## Overcoming Obstacles to Joint Use Management & Maintenance Costs:

Schools are also reluctant to enter joint use agreements or redesign their schoolyards for fear of the increased maintenance costs that come from a more complex design and greater use. This obstacle can be overcome by entering a formal agreement with a partner—such as a nonprofit or city parks department—that clearly defines maintenance roles and responsibilities. Nonprofits and community organizations who have a vested interest in the schoolyard may also be useful in providing maintenance.

## The Maintenance Battle



### Planting Beds

#### Pros

Requires only one or two clean ups a year, which can be done by volunteers. Minimal water consumption. Minimal equipment.

#### Cons

Can get weedy & scraggly if not maintained yearly. Requires knowledge of plants, which maintenance workers may not have. Often controversial for that reason.



### Lawn Areas

#### Pros

Little knowledge base required to maintain. With regular mowing, never gets scraggly. Trim & tidy. Accepted landscape norm.

#### Cons

Volunteers often not allowed to operate mowers. Requires weekly or bi-weekly mowing. Equipment is expensive to purchase and maintain. High water consumption.

## Case Study Clearing the Maintenance Hurdle

Washington, D.C.

Brent Elementary School

To overcome the maintenance barrier, the designer developed a plan that is low maintenance and cost effective yet still teeming with plant life. The design replaced 1500 sq ft. of asphalt and an additional 6,200 sq ft of lawn planting beds, play areas, garden areas. Since it was redesigned, volunteers have routinely helped with the maintenance, saving the school an estimated \$18,000 per year in maintenance costs. Since the design was constructed, the school has seen 191% increase in demand for enrollment. Student attendance, test scores, and parent engagement have also gone up.

Brent Elementary School: Butterfly Garden



Planting beds beautify school grounds while also reducing water consumption and providing a butterfly garden for interactive curriculum. Photo Credit: [Landscape Architecture Foundation](#)

## Liability

Schools are often reluctant to enter joint use agreements for fear they will expose themselves to potential lawsuits if an injury occurs on

**All 50 states provide some type of legal immunity to public schools participating in joint use agreements.**

school property. A mounting body of evidence suggests these liability concerns are inflated and lawsuits rarely occur from joint use. As joint use becomes more common, officials are adapting policies and laws to minimize the liability of schools in a

joint use agreement (Changelab Solutions, 2013; Baker, 2010). In fact, many states shield schools from lawsuits.

## Safety, Theft, and Security

Schools are often reluctant to grant access to indoor facilities due to concerns for student safety, vandalism and theft, and the staff supervision that public access to facilities after hours may require.

Although concerns for student safety and vandalism are still present in schoolyards, the stakes are greatly reduced due to lack of access to the building. For this reason, staff supervision is rarely required for access to a schoolyard after hours—making it accessible to the public at all hours with little added cost.

**Concerns over student safety, vandalism, and security are reduced for schoolyards due to limited access to indoor facilities.**

## Understanding User Needs

Although every person is unique, understanding the general needs and desires of specific user groups is one way to test a design against objectives.

### Needs of Children and Youth

In the context of schoolyards, the needs of the students should always come first. There is no shortage of information on how to leverage the design of a schoolyard to improve the health, education, and overall quality of life for children and youth. **Four themes emerge: linking design to curriculum, integrating nature, demonstrating healthy food production, and encouraging active recreation.** The underlying impetus for playground improvement is to combat the rising obesity rate among children and to link schoolyard design directly to curriculum to improve the quality of learning experiences. However, schoolyards are often redesigned without linking the design specifically to physical exercise or learning objectives. Developing a set of objectives and linking research to design will help ensure the proposed design will meet the intended outcomes.

### Perkins Elementary School, Boston MA.



In partnership with the Boston Schoolyard Initiative, Perkins elementary found a way to incorporate active play, nature-based learning, and garden activities while linking the schoolyard to classroom curriculum. Photo Credit: [Boston Schoolyard Initiative](#).

## Needs of Adults & Active Seniors

Nearly all environments are designed with the able-bodied adult and active senior in mind, and therefore nearly all design and planning

### **Adult playgrounds, or “fitness zones,” are on the rise in the U.S.**

literature can be applied to this subgroup. There is a growing body of research that shows [physical activity in older adults carries a host of health benefits and delays debilitating illnesses and injury](#) (CDC, 2013). Not surprisingly then, there is a trend to incorporate adult fitness equipment into designs. Some municipalities have even created [adult “fitness zones”](#) that are similar to children’s playgrounds only they are used by adults. Determining the desirable level of adult activity in the schoolyard and the desirability of segregating it from children and youth activity is essential to a successful design that allows adults to utilize the same space as children without deterring the younger patrons from using the schoolyard.

## Needs of Frail Seniors

The bulk of research for frail seniors deals with hospice care environments. It may be necessary to borrow from this literature until more is known about the needs of frail seniors in joint use environments. Accessible and non-challenging environments are a must for frail seniors. Access to restrooms is also essential. **Frail seniors with dementia focus heavily on sensory details, such as vivid colors, the profuse smell of blooming flowers, or the sound of a gentle waterfall or children playing nearby.** Fortunately, these elements also provide rich learning environments for children. In fact, interaction with nature has been shown to benefit people of all ages and abilities.

## Designing Multigenerational Schoolyards The Importance of Compound Value

The small size of schoolyards can make it challenging to design for the diverse needs of the community while still meeting the needs of children and youth. Getting compound value out of the design is essential to attaining the

maximum recreation, education, and health benefits. **Compound value occurs when one design component serves multiple functions.** An outdoor auditorium may provide an outdoor classroom for teachers during the day and a place for seniors to gather and take refuge from the sun in the late afternoon. A retaining wall may serve as the boundary of a play area, provide a platform for seating, and hold soil for a garden feature. **One way to tell if design has compound value is to see how many uses one design component brings.** Ensuring the design achieves compound value is essential to meeting the competing demands of smaller schoolyards.



Photo Credit: [Quatrefoil, Inc.](#)

### **Portland Memory Garden:**

Accessible & comfortable seating close to gardens draws people of all ages and abilities. Note retaining wall doubles as seating and pavilion provides shaded seating area, wayfinding element, and entry point.

## Beyond Accessibility

Although schoolyards should be accessible to people of all ages and abilities, accessibility alone is not enough to guarantee the design will actually attract people of all ages and abilities. Moreover, accessibility is too often the final goal when dealing with the needs of an aging



population, rather than a starting point. Planners and designers should challenge themselves to go beyond accessibility to create places that are not only accessible but also attractive, lively, and engaging. **The strong focus on accessibility for seniors is comparable to the strong focus**

Fall Creek Elementary, Ithaca, NY. Example of designing a space to meet the specific needs of a user. Can the same attention to detail and safety be accomplished with seniors?

**on safety for children.** But as demonstrated by playground designs, which are increasingly becoming more complex and engaging without neglecting safety, one does not preclude the

other. The same creative approach is needed for making spaces for adults and seniors active and engaging.

## Life After Design

Although research suggests the redesign of a schoolyard leads to greater use of the schoolyard (Brink et al, 2010), it is a common mistake to believe the design and construction of the schoolyard is the final stage in the process. Anecdotal evidence suggests that seniors are often reluctant to use areas that are also frequented by youth, while one study suggests physical features are less important to seniors than social factors, such as an organized event or a regularly scheduled fitness class (Cohen et al, 2009). Or adults simply may not recognize that the schoolyard has been designed to facilitate joint use and pass it by in favor of parks that are the traditional domain of adults. Another study suggests that parks that receive regular maintenance and upkeep leads to more people using the park, as well as the increase of the general aesthetic value of the park (Mowen, 2010).

**Studies show seniors place more emphasis on social programming than physical design.**

## Role of the Planner: Start to Finish

As interdisciplinary professionals who often bridge multiple departments within a municipality, planners are uniquely positioned to facilitate the cross-departmental partnerships that are necessary to attain a joint use agreement.

Data Collection	Public Outreach	Grant Writing	Analytical Forensics	Stakeholder Liaison	Joint Use Advocate
Collect data to use for analysis, partnership development, and grant writing.	Conduct public meetings and synthesize data for broader audience.	Identify & write grants. Support community partners in grant writing.	Conduct feasibility studies, environmental reviews, and financial projections.	Identify stakeholders. Promote cooperation. Organize meetings.	Promote the inherent advantages of joint use and multigenerational design.

## The Rural Schoolyard

Rural and suburban schoolyards present a different problem: what to do with all that space? Studies have shown that paved pathways lead to increased physical activity among adults and seniors (Bensyi, 2013). **In suburban and rural areas where streets often lack sidewalks, paved pathways provide a safe place for people to walk without fear of vehicular traffic.** A smaller, more intimate space that is centrally located close to a school provides a place for the community to gather, especially seniors who may feel exposed in the large environment and need to remain close to restrooms and services. With proper infrastructure like pathways, outdoor exercise equipment, and restrooms, an expansive schoolyard can easily double as a park and provide both active and passive recreation for people of all ages and abilities.

## Conclusion

As public health officials and community leaders continue to push for joint use agreements that expand recreational opportunities to the general public and schoolyards continue to undergo rebuilding to foster learning and physical activity, it is essential that public officials capture this opportunity to create schoolyards that benefit people of all ages and abilities. Designing schoolyards for multigenerational use can be a challenge, but the rewards of promoting community interaction and healthy activities for a wider cross-section of the community far outweigh those challenges. By leading the charge for multigenerational playgrounds, planners can help communities conserve valuable public funds while also promoting healthy communities.

# Case Study

## Rural & Suburban Joint Use

### Pitt County, North Carolina.

Like many rural areas with a strong education sector, Pitt County is a mix of urban, suburban, and rural areas. [Thirty years ago Pitt County designated all public schools as "community schools" and worked with the school board to jointly develop recreational facilities.](#) The agreement opened recreational facilities to the community after school hours. The most used recreational facility is the extensive walking paths, and the parks department regularly hosts activities for seniors. The cooperative nature of this partnership is even reflected in the name of department that oversees it: Dept. of Community Schools and Recreation.

***Multigenerational schoolyards provide valuable recreation facilities to the community while conserving public funds and promoting healthy lifestyles.***

## Urban Joint Use

### Baltimore County, Maryland.

Joint use is nothing new to Baltimore County. The county, parks and recreation department, and board of education have [operated under a joint use agreement and "school-recreation center concept" for the past 60 years.](#) The parks and recreation department shares land acquisition & maintenance responsibilities with the board of education. Through this long-standing agreement, Baltimore County has been able to provide more services for less costs to the taxpayer. The agreement has provided amenities that would not be available otherwise, such as full-size gyms, additional athletic fields, tennis and multipurpose courts, and comfort stations.

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