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*Journal of Planning Education and Research* 2006; 25; 433

DOI: 10.1177/0739456X06288092

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# Public Schools as Public Infrastructure

## Roles for Planning Researchers

*Jeffrey M. Vincent*

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### ► Introduction: Cities and Schools Disconnect

Our nation's public schools are important elements of public infrastructure. The quality of cities depends, in part, on the quality of schools. Likewise, the quality of schools depends on the quality of cities. Yet there is a profound disconnect between cities and schools that is evident in local practice, research, professional degree programs, and most levels of policy making. Likewise, there is a troublesome disconnect between the education field and the field of city planning that needs to be overcome. For example, while planning for new and existing schools is rarely part of a university's city planning program curriculum, so too are school facility issues altogether absent from most education program curriculum. As a result, the cross-pollination of these fields is missing at the professional development level in each core curriculum—a trend that works to support a “cities and schools disconnect” found in practice, policy, and research.

To help dismantle the disconnect, this article is aimed at planning researchers and argues that public schools, particularly their infrastructure and capital planning, need to be much more integrated into broader urban planning and policy making and that significant gaps exist in our understanding of how to do so. This article sees public schools as essential public infrastructure and discusses existing institutional arrangements between schools and city planning, particularly in regard to urban (re)development and the construction of new school facilities. The article then identifies key obstacles to dismantling the disconnect and finishes by recommending two key areas of research that city planning scholars could contribute to making quality schools part of quality cities.

The catalyst for this article is the recent focus on school facilities and smart growth, particularly the institutional and policy structures that enable or inhibit localized coordinated planning efforts (Baum 2004; Donnelly 2003). Two key issues form the backdrop: first, the widespread notion of “failing urban school systems” (Noguera 2003); and second, the nationwide surge in new public school facility investment (Agron 2005). Planners, both practitioners and researchers, are familiar with the problems of the former and how they impact neighborhoods and cities. But planning scholars need to realize that they have important roles to play in the latter.

*Journal of Planning Education and Research* 25:433-437  
DOI: 10.1177/0739456X06288092

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### Abstract

Our nation's public schools are important elements of public social and physical infrastructure. The quality of cities depends on the quality of schools. Likewise, the quality of schools depends on the quality of cities. This article is focused on looking at our public schools as public infrastructure, particularly in the context of inner cities and older suburbs. The article argues that there is a profound and detrimental “cities and schools disconnect,” and as a field, planning has virtually ignored our public schools. City planning scholars need to increase their engagement with public schools and school facilities and think more critically about how development and redevelopment decisions ultimately impact our public schools.

**Keywords:** *public schools; land use; public infrastructure*

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In short, planning researchers need to more substantively add to the national dialogue on public schools, especially around facility and land use issues, and provide critical research on how development and redevelopment decisions ultimately impact our public schools.

### ► Schools as Public Infrastructure

Public schools are a unique kind of infrastructure—both physical and social. They consist of great amounts of land and physical building stock within cities. There is widespread belief that the American public educational system is failing to meet the needs of all students, especially those in urban centers (Noguera 2003; Rothstein 2004). Facing poor-quality city schools, families with resources flee central cities for suburban schools or simply opt out to private schools. They leave urban schools with fewer resources, material or intellectual, to serve communities of increasing levels of concentrated poverty. These demographic shifts are causing an unprecedented rate of racial and economic segregation in our public schools (Frankenberg and Lee 2002; Orfield and Lee 2005). City prospects are greatly impacted by these trends, with perceptions of low quality schools quite often leading the list of concerns about urban life.

Nationally, the K-12 student population rose 19 percent from 1989 to 2002 and is now at about 55 million students (National Center for Educational Statistics 2005). The U.S. Department of Education (1999) predicts that twenty-three states will increase while twenty-seven states will decrease in enrollment between 2002 and 2014, for a 4 percent national net increase. Regionally, the West and Southwest will likely grow the most—by a predicted 13 percent.

Increasing student numbers place a strain on school facilities—in regards to both capacity and wear. The need for upgrading and expanding the nation's public school infrastructure has been described as a "crisis." In 1995, the U.S. General Accounting Office found that nearly one-third of all public school buildings in the country were in a serious state of disrepair, requiring \$112 billion to repair. More recently, the National Education Association (2000) put this number at \$322 billion. The American Society of Civil Engineers (2005) found that most of the deficient facilities are in urban areas, primarily serving low-income students.

As a result, the United States has entered an era of tremendous need for upgraded and additional public school infrastructure. The amount of school construction nationally in 2004 again reached an all-time high, even though spending in other areas of education was cut (Agron 2005). School districts spent \$29.1 billion on construction in 2004, a nearly 20 percent increase from 2002. Similarly, 2002 saw a 24 percent increase from 2001. Since 2003, new construction has topped expansion and modernization spending. California

leads the way and has passed more than \$26 billion in state-level facilities bonds since 2002. States across the country are doing the same: New Jersey is implementing more than \$12 billion in school construction, the largest in the state's history. Ohio recently began a four-year, \$10.5 billion program. This tremendous surge in building schools entails massive influxes of capital expenditures in certain neighborhoods, requiring enormous amounts of land. Projections through 2007 show continued construction increases (Agron 2005). While many suburbs are growing and building schools, some of the greatest need for new schools is found in built-out urban neighborhoods where available land is scarce, local economies tend to be more depressed, and households tend to be lower-income (Sack 2004).

It appears inevitable that there will be land use and planning conflicts at local levels as states and school districts move to build more schools. However, the planning field has largely ignored school planning, leaving it solely the responsibility of school districts, when, as Orfield (2002) shows, the location and quality of schools has a multitude of impacts on our urban areas. Schools impact neighborhoods, cities, and regions. City officials realize that poor-performing schools hinder city revitalization efforts such as attracting and retaining businesses and middle-class families. Educators know that urban poverty concentration limits students' academic performance. As public rhetoric continues to fault "failing urban schools," the planning field must critically ask, How do planning decisions (and nondecisions) benefit or hurt local schools?<sup>1</sup> We need to be concerned with the role of our public schools system—a social and physical infrastructure that is vital for the health of cities.

### ► Public Schools and City Planning: Institutional Obstacles

The critical problem in the separation of school facility planning from municipal land use planning is that there is often no institutional framework that even creates a space for these planning entities to plan together. This sectoral fragmentation of policy making jurisdictions makes school facility planning logistically difficult and politically contentious (Baum 2004; Donnelly 2003; Earthman 2000). Four key obstacles exist in this regard: the silo planning phenomenon, school site acreage requirements, funding issues, and fluctuating student populations.

*1. Silo planning phenomenon.* School districts have unique local land use autonomy. This "silo planning" has been criticized by planners and smart growth advocates. In most states, school districts have authority separate from local land use planning agencies. For example, in 1994 the courts ruled that South Carolina school districts were not obligated to work

with local planners or other government officials when selecting a new site (Kouri 1999). Consequently, this creates a public policy conflict in reducing sprawl, easing transportation, promoting neighborhood revitalization, and so on. As long as cities continue to exclude school planning as a major component of comprehensive planning, districts will most likely be reluctant to relinquish any of this autonomy.

2. *School site acreage requirements.* School siting requirements are a major point of contention between city planners seeking to create mixed-use environments and school planners seeking to meet the requirements for adequate athletic fields, ample parking, and school buildings. Siting regulations have been heavily critiqued as leading to “school sprawl” (McMahon 2000). One author charges that the public school system is the “most influential planning entity, either public or private, promoting the proto-typical sprawl pattern of American cities” (Steward 1999, 370). Individual state education departments recommend or mandate the minimum number of acres for schools. Standards for elementary schools typically require about ten acres, high schools thirty-five to forty acres, plus another acre for every additional one hundred students, as has been recommended by the Council of Educational Facility Planners International (CEFPI; 1991). These types of standards require large tracts of land and are often nearly impossible to find in built-out areas. However, CEFPI’s (2004) new school facility guidelines no longer list minimum site size recommendations. As of 2004, twenty-two states no longer have minimum site size requirements.

3. *Funding issues.* In most states, the school facility funding apparatus is designed around a suburban growth model that inadvertently prioritizes areas with rapid development and/or places high emphasis on the ability of development fees to fund local matches. These scenarios make the financing of new schools in urban areas, with little new development to fund them, very difficult. This structure places urban school districts at a severe disadvantage as they compete for limited state facility funds. Additionally, many states’ school facility funding structure is biased toward building new schools rather than modernizing older schools (Beaumont 2003). Many states have a formula that if the cost of renovating an older school exceeds a certain percent (usually around 60 percent) of the cost of a new school, the school district should build a new school if it wishes to receive financial assistance from the state. However, these percentage rules typically prevent a full cost analysis because they rarely factor in the added infrastructure costs of site acquisition, water and sewer connections, and needed transportation infrastructure (Executive Office for Administration and Finance 2000).

4. *Fluctuating student populations.* Public school systems have struggled to cope with demographic changes in this

country, particularly the impacts of poverty concentration, the changing age structure of neighborhoods, and rapidly growing immigrant populations. Schools must cope with cyclical changes in student enrollment, making it difficult to afford an adequate supply of facilities in the context of cyclical increases and declines in enrollment. School districts are challenged by the need to cut costs and not give up scarce sites for the future.

## ► Roles for Planning Researchers

Two main areas of research that city planning scholars can contribute regarding issues of public school infrastructure are (1) schools in relation to land use and local built environments and (2) multiagency governance issues.

*Built environment and land use relationships.* Relationships between public schools and the built environment and land use call for planning research because planning decisions bear important and ill-understood consequences for schools and their adjacent areas. Questions at the intersection of school location (Beaumont 2003; Beaumont and Pianca 2002), student walkability and transportation access (Ewing and Greene 2003; McMillan 2002), and the impact of proposed nearby (re)development (Katz 2004) are essential to an understanding of how we might simultaneously improve school quality and urban neighborhoods. Similarly, how does school siting impact nearby land development patterns? A variety of new trends in building school facilities have emerged: small schools, joint-use facilities, and strategic school location in urban infill sites. These new visions have the potential for simultaneously supporting quality schools and healthy urban (and suburban) communities (Chung 2002). Yet since the work of both Perry (1929) and Stein (1958) on planning for the “neighborhood unit,” little recent empirical literature exists on siting new school facilities within the context of integrated and comprehensive city and metropolitan planning.

Housing planning typically occurs at the same time as new school planning both in suburban and urban areas. For the suburbs, what connections can be made between residential development and new schools? In urban areas, as Katz (2004) questions, what connections can be made between housing, redevelopment, and school construction or modernization? Should schools be the center of focus? What size should they be? Should they be stand-alone facilities or joint-use? What are policy levers for incentivizing and maximizing schools’ role in redevelopment processes? What are models to guide this? These are important questions for planning researchers, and they will eventually need to be tied to academic achievement outcomes, which is paramount in educational policy making. Planning scholars need to build a body of critical,

empirical research around these ideas, building theory and providing recommendations for practice.

*Multiagency governance.* Breaking down the institutional and disciplinary barriers between city planning, education, and other related fields is necessary to improve both cities and schools. Governance work must develop the institutional frameworks to support joint planning. First, we need to create institutional linkages across fields and disciplines. Second, local “civic capacity”—the extent to which different sectors of the community, from business to parents to local officials, educators, and others, mobilize around important issues—needs to be built to create a strong shared commitment and plan of action for improving public schools (Stone et al. 2001). Third, the different disciplines must educate each other on their respective responsibilities and conceptions of what makes a quality school and what makes for quality cities (McKoy and Vincent 2005). In short, connecting cities and schools will require joint planning between planners and educators.

Research needs to identify incentives for joint planning efforts so that various institutional and community actors will come together. What are the opportunities and obstacles that exist for such efforts? Once groups agree to come together to jointly plan, how should this process be structured? Who should be the lead agency? How will funding streams be aligned? Innovative institutional governance arrangements need to be documented and critically analyzed. Currently, the literature lacks detailed “lessons learned” and “best practices” on how agencies at different levels can work together to plan jointly for schools while coordinating other decisions such as land use, transportation, and housing such that they support school quality. How do planning processes work to develop mixed-use projects that include new public school facilities? More fundamentally, as school districts set out to utilize the great influx of state construction dollars, what factors lead school districts to build schools where they do? How can land use planners better accommodate new school facilities? Much must be learned about siting new schools, land use development patterns, and how to coordinate existing institutional governance.

### ► Conclusion

In 2000, one in six students attended a large, central city school. These schools are plagued by overcrowding, old facilities, and tightening budgets nationwide. Simultaneously, municipalities and regions are faced with limiting sprawling development; limited public utilities and transportation; changing demographics; and the independent-minded, silo thinking of both school districts and local governments. It is within this reality that the focus on schools as infrastructure becomes so important and complex.

As a field, planning has largely ignored issues about public schools. Practitioners have made better progress (e.g., *Planning Commissioners Journal* 2004; Donnelly 2003; Langdon 2000) than the research community. We need to understand public schools as unique elements of public infrastructure that have deep equity concerns and are tied to ever-changing federal education policy. Smart growth researchers have begun to look at the role of schools in fueling growth (e.g., CEFPI and U.S. Environmental Protection Agency 2004; Passmore 2002). However, as Baum (2004) rightly argues, these discussions have focused almost entirely on the suburbs, largely ignoring the issues of race, class, and urban schools that so greatly impact entire metropolitan areas. In reality, “failing urban schools” are quietly fueling metropolitan suburban growth as middle-class families follow the “good schools” to the outer suburbs.

We have a long way to go in bridging the cities and schools disconnect, and the field of planning must better integrate public schools within its theory, its research, and its practice. Planning researchers cannot do this alone; it will take cooperation with educators to learn what makes quality schools. But planners do need much more systematic thinking about how the seemingly un-school-related decisions, particularly around land use and (re)development, impact local schools. While many believe “we must fix the city schools before the city can make a comeback,” city schools need a great deal of help responding to the urban realities over which they have absolutely no control, especially poverty concentration in cities (Rusk 2005, 3). Overall, two complimentary realities define the school infrastructure issue: (1) the quality of schools impacts the prosperity of cities and (2) how cities change and develop impact the quality of schools. Therefore, the future quality of regions, cities, neighborhoods, and schools is intertwined.

*Author’s Note:* The author would like to thank Deborah McKoy and Vicki Elmer for their encouragement and support on this work.

### ► Note

1. This orientation has been crafted with Deborah L. McKoy at the Center for Cities & Schools at the University of California, Berkeley.

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