

Going Back to School: Reflecting on School Space as “Shared Space” to Shape Cities and Communities

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Abstract

There has been a growing interest in Australia for public schools to share their facilities (space) with local communities, driven by the understanding that these substantial public investments have the potential to yield additional social, environmental, and economic benefits to their immediate neighbourhoods. Yet, there is limited critical research on this topic, particularly from an urban planning perspective. This article reflects on schools within the broader spatial environment to understand how outdoor recreational and green spaces of schools can be enhanced to optimize their role within the city and to advance “schools beyond schools.” This study deviates from prior research by examining the conceptual progress in urban planning that envisions educational institutions not merely as pedagogical entities but as pivotal urban nodes capable of enhancing the socio-spatial dynamics of shared spaces. Through a systematic review, this article exposes the concept of “shared space” in reference to educational spaces (school grounds). It draws on the Share Our Space program of the New South Wales Department of Education to provide an in-depth understanding of the “shared space” framework, analysing both the inherent advantages and potential challenges in the future evolution of this model. The findings revealed a prevalence of academic studies on shared use or joint use agreements as the primary approach for granting community access to school facilities. In these agreements, the main challenges to sharing school spaces with communities or partner organizations were managerial and legal considerations. The research emphasized the need for a collective reimagining of school facilities and a comprehensive re-evaluation of shared school space within the broader urban context, which is particularly vital in the pursuit of resilient urban futures. This will require addressing gaps in collaboration between education and planning disciplines, the participation of the communities they serve, and developing a frame of reference to guide the dialogue. Local planning authorities are crucial in facilitating and implementing such a multi-disciplinary approach to reposition school spaces as the focal point of sustainable city and community development.

Keywords

city planning; local community; joint use; school space; shared space

1. Introduction

Public schools constitute a form of public infrastructure that requires substantial investment in terms of land and construction. This is also true for Australian cities which have grown in recent decades, and where municipal governments have been under increasing pressure to provide services to communities, particularly in core urban areas where space to build new infrastructure is scarce (Infrastructure Australia, 2019). As a result, there is a renewed interest in how school infrastructure may support community services and activities (Rivera-Yevenes, 2023). In 2022, the total play space area within New South Wales (NSW) public schools exceeded 5,040 hectares (NSW Government, 2022). However, despite their classification as public infrastructure, schools frequently lack an integrated planning strategy that aligns their infrastructure with the broader community they serve. This issue is exacerbated by policies that saw the separation between schools and communities through the wide introduction of high-security fencing in most schools, particularly across NSW since 1996 (Rooney, 2015). As a result, the utilization of such substantial public investment remains confined to school premises, and strictly during school hours and terms. It is common to see vacant school playgrounds, sports fields, and open green spaces enclosed by fences, creating a sense of separation from neighbouring areas.

The idea of shared school space is not a new concept (Spengler et al., 2011). The OECD report *Schools at the Crossroads of Innovation in Cities and Regions* identified schools as an innovative space that could steer progress in community health and wellbeing (OECD, 2017, Chapter 3). The research explored how green school grounds could be opened to school children and older residents as neighbourhood parks (Rigolon et al., 2015). It also investigated how city parks could act as outdoor classrooms and how the design and planning of these spaces through participatory processes could contribute to intergenerational needs (Rigolon et al., 2015). Green open public spaces are considered public goods that provide services to not one individual (Shoari et al., 2021) but rather should be shared across communities to optimise a collective value and enhance the quality of life of everyone. In 1982, the Council of Educational Facility Planners International in the United States raised the need for schools to share their facilities with local communities. The reasons related to the demand for cooperation and collaboration are economic loss, increasing demand for services, and social change (Council of Educational Facility Planners International, 1982). Since then, there have been several programs in the United States supporting joint use agreements between schools and organisations, promoting sports and wellbeing (discussed later in this article).

In the Australian context, there is a renewed interest in the topic, recognising the need for renewed thinking about schools and community infrastructure, alongside their multifunctionality. For instance, it has been announced that the state-of-the-art sporting facilities at the Sydney Grammar private school will be shared with some of the surrounding residents, justified by the large sum of public investment in private schools (Carroll, 2023). This is not an isolated attempt, with the Share Our Space program piloted by the NSW Department of Education and the Department of Infrastructure and Environment in 2017 still in full operation (NSW Government, 2022). In this program, outdoor play and recreation areas of participating schools are open to the public during school term holidays, approximately 12 weeks annually in NSW,

Australia (NSW Government, 2022). Another project, Opportunity Spaces, in the State of Victoria in Australia, explored effective ways for the community to share school facilities (Australian Government et al., 2024). It is evident that schools are increasingly being recognised “by their nature, as public spaces” (Singhal, 2018). However, shared space programs have been approached in an ad hoc and inconsistent manner (Omura et al., 2017) and with limited research evidence. Ideas of intergenerational campuses, shared green spaces, and vertical schools are not new, yet provide opportunities to rethink the use (and purpose) of urban spaces, alongside schools as community hubs and social infrastructure.

This article is based on one of the outcomes of a research project undertaken at the University of Technology Sydney, Australia, funded by the NSW Department of Education to evaluate the Share Our Space program from 2021 to 2022. The scope of the project was to link the concepts of shared space and social sustainability and frame the concept of shared space as a community space in educational centres. As the first part of the project, this article presents the results of a systematic review of the “shared school space” literature. It provides an in-depth understanding of the “shared space” framework, analysing the inherent advantages and potential challenges in the future evolution of this model. The article examines the concept of “shared school space,” departing from the theoretical discussions in urban planning and design about the role of public schools in city planning, as well as the broader concept of shared space.

The Share Our Space program commenced in 2017 to promote the communal use of outdoor spaces of schools, including sports and recreational facilities, to promote better use of school facilities and improve access to green and recreational infrastructure, supporting community building (NSW Government, 2022). The program initiated its first pilot in 2017 with 42 schools. Although the program experienced spurs of both growth and decline in the number of participating schools due to events such as the Black Summer bushfires in 2019 and the Covid-19 pandemic lockdowns, it showed an overall significant increase in the number of participating schools, with a total of 497 schools in the Spring school holidays of 2022. However, participation levels are still not optimized, considering that there are a total of 2,217 schools in the state of NSW.

2. A Review of Background and Context

Schools are a key social infrastructure in cities, commonly fenced away from their local areas and serving a one-dimensional educational role. As such, their significance is often underestimated, particularly regarding their contribution to broader social ideals. In this context, this research investigated public schools as shared spaces and focal community places, reflecting on the notion of “schools beyond schools” (understanding schools as part of social infrastructure and not merely educational facilities) and its contribution to the urban fabric.

2.1. Social and Economic Perspectives of Shared Spaces

The limited use of school facilities raises significant concerns from social and economic perspectives. In social terms, there is compelling evidence indicating a gradual decline in accessibility to green open spaces globally (Kabisch et al., 2015). Candiracci (2022) calls for specific attention to the demise of accessible children’s play areas as a “silent emergency,” as it limits opportunities for human interaction and playful learning experiences, eroding the social fabric of cities. On the other hand, green open spaces are widely celebrated in the academic literature for their contribution towards liveable, sustainable, and resilient cities,

achieved through improved microclimate, reduced urban heat, better access to neighbourhood green spaces (Wolff & Haase, 2019), and physical and mental wellbeing (Zhang et al., 2020). Other studies have recognised direct and indirect economic benefits associated with the positive social effects of green infrastructure (Cilliers & Timmermans, 2013). Public open green spaces serve a significant social function in fostering social capital within local communities. On one hand, they contribute to the formation of “bonding social capital,” which arises from relationships among individuals with similar socioeconomic backgrounds. On the other hand, they facilitate the development of “bridging social capital,” which encompasses networks that bridge societal divisions (Pawson & Herath, 2017). The existence of diverse social networks within these spaces cultivates friendships and fosters cohesive communities, empowering residents to realize their potential. The inherent educative role of schoolyards and school spaces adds a critical dimension beyond the accessibility to open spaces to further integrate educational open spaces in the urban fabric, potentially facilitating social inclusivity, as indicated by UNESCO’s new urban ideals such as “learning cities” (UNESCO Institute for Lifelong Learning, 2015).

During the Covid-19 pandemic, it became evident that urban green spaces are crucial for supporting healthy societies and an enhanced quality of life, with inner-city parks heavily used for recreational purposes, and periodically being overcrowded (Reinwald et al., 2021). At the same time, paradoxically, schools were closed and remained empty or of reduced use during the pandemic. These abrupt changes from Covid-19 reflected significant perceptual and behavioural shifts, some of which can trigger long-term benefits. As the focus of this study, the potential of sharing open spaces and recreational infrastructure of schools with local communities represents one of these perceptual shifts that can have multiple economic and social benefits.

A more general theme in the shared-space debate, although not necessarily relating to the physical and tangible elements of schools, is the debate about shared spaces of education facilities. Shared education was conceived as a social school experiment in which several sectors, in partnership with the community, would foster and encourage opportunities for meaningful and collaborative learning practice (Gallagher, 2016). The essence of shared education is to increase the inclusivity and integration of people within a particular community, reducing segregation and promoting a more meaningful life. The model for shared education is predicated on collectivism, community-based development, and partnership. Hence, Knox and Quirk (2016) assert that shared education involves a participatory process through which involved parties share or use certain specialised facilities or services. The applicability of shared education within the shared-space agenda has been practised in Northern Ireland since 2007 (Hughes & Loader, 2015). Shared education offered some grounds to understand the benefits and priorities of the existing educational systems as not limited to students, also having a positive influence in a community and a purpose for social cohesion in a locality. In this article, the “shared educational space” paradigm is adapted with an acknowledgement that shared school spaces can work as community infrastructure and community hubs.

From an economic standpoint, governments allocate substantial amounts of public investment towards the establishment of school infrastructure, as well as the creation of open spaces, recreational areas, and sporting facilities for the benefit of communities. For instance, the NSW Government has committed an \$8.6 billion investment over the next four years to deliver new and upgraded schools across the state (NSW Government, 2023c). At the same time, and in recognition of the importance of accessible public open spaces to community wellbeing, the state government has also dedicated \$200 million to deliver new and improved public open spaces in communities through the Parks for People and Open Space programs.

Furthermore, the state government is investing \$200 million in new and upgraded sports facilities (NSW Government, 2023a, 2023b). This is at a time when governments are grappling with intensified financial constraints in the context of current financial crises. Economic volatility, fiscal stress, credit constraints, and austerity measures mean governments need to do more with less, placing a higher priority on putting existing public assets to multiple uses. Given the relatively low utilization of school facilities and the presence of accessible recreational, sports, and open space infrastructure within schools, particularly at the local level, it is prudent to maximize the potential of existing and new assets by using them for multiple purposes.

2.2. An Urban Planning Perspective on Schools

Urban planning literature refers to the role of schools in relation to neighbourhood planning. A common narrative is the view of public schools, more specifically, as key community facilities in terms of the meaning they bear and the value they can bring to the community, and, more broadly, in relation to community building and social reforms. Vitiello (2006) historically explains, in relation to the myriad of social reforms city planners aimed to implement through design, “the most prolific and lasting antebellum reform movement of all was the revolution in public schooling” (p. 183). While societal ideals emerged within the education realm in the late nineteenth century, they inherently intersected with the built form through broader public agendas.

However, these became professionally isolated through the emergence of different professional fields, despite schools representing a vital part of urban planning. As Glazer (1959, p. 191) pointed out, “the school pretty much disappeared as an important element from planning literature and planning discussion.” Since then, little attention has been given to the topic of school infrastructure in the urban planning discipline, most of the time incidental mention in larger conceptual urban debates (McShane & Wilson, 2017; Vitiello, 2006), with limited discourse on planning and design changes and proposals.

A highly cited early city planning model on the important role of schools was proposed by Clarence Perry (Larice & Macdonald, 2013). Perry proposed the neighbourhood unit to be planned around key principles, one of them being the institution’s site, including the local public elementary school, “should be suitably grouped about a central point or common area” (Larice & Macdonald, 2013, p. 80) surrounded by green spaces, such as a communal park, within walking distances to all households in the neighbourhood unit. In addition, as a non-political space, schools offer the ideal public space for community encounters, gatherings, and public participation, which are key factors to neighbourhood functionality and community life and cohesion. The school transcends its role as a mere educational institution and assumes a community-oriented value and shared functionality within the local neighbourhood.

This research supports expanding the role of schools for community purposes, as education experts justify larger public expenditure for extending the educational function of schools to after-school hours and to other population groups, including adults (Engelhardt & Engelhardt, 1940). However, the discourse between planners and educators remains separate, as McShane and Wilson (2017) explain, reflecting the nineteenth-century model of schooling that segregated school-based learning from other social processes (Campbell & Proctor, 2014). The use of schools for community purposes has been limited to programmatic strategies within education, while the space of schools in neighbourhood planning has been the domain of urban planners, with government guides and regulations focusing on siting and area size but not extending

beyond the school's boundaries (McDonald, 2010). This has resulted in spatial and institutional segregations that persist to date (Vincent, 2006).

In urban planning, this dualistic approach separates the school site from the community and the roles of planners from educators. It is inherent to the modern concept of the “functional” city, which favoured rigid zoning separations and a focus on mobility and automotive highways (Barnett, 2011). This approach moves away from the social narratives that inspired planning ideals with visions of schools as integrated social and community-building instruments. Critics of the modern functional city, such as Gehl (2011), Jacobs (1961), and Whyte (1980), argued against its ramifications on the social life of cities. They pointed out that models of isolated educational communities contribute to suburban sprawl, car dependency, greenhouse gas emissions (Tachieva, 2010), and negatively impact neighbourhood sociality and walkability (Hillier, 1996). In these opposing narratives, schools potentially represent opportunities for the “integration” rather than segregation of social life.

Jacobs (1961) supports urban integration and the resulting diversity and vitality, challenging the belief that the mere presence of key social infrastructure like schools automatically results in good neighbourhoods. She emphasizes informal street life as essential to good neighbourhoods, suggesting that schools, beyond centrality and walkability, should be integrated into the urban fabric. The New Urbanism movement of the late 1980s and 1990s, started in opposition to the deterioration of urban life due to inept planning practices (Grant, 2005), referenced concentrations of civic, institutional, and commercial infrastructure, including schools, in neighbourhoods and districts, enabling walkability (Larice & Macdonald, 2013). This mirrors Perry's initial ideas about the role of schools in urban planning. Glennie (2020), Dempsey et al. (2011), and Woodcraft et al. (2011) continue to frame the role of schools in urban planning, but contributions to move the debate forward are limited.

Evidence-based urban planning studies have contributed to this discourse. Choguill (2008) demonstrated the social benefits of planned neighbourhoods with central primary schools, and Borland (2020) analysed post-disaster initiatives in Tokyo, where parks next to schools rebuilt community confidence and social bond. While these studies add evidence, they lack focused attention on spatial and governance articulation. Zamanifard et al. (2018) explore South Bank Parklands, a case study in Brisbane, Australia. This research established that formal and informal actors in public spaces drive a complex process, and public space governance is influenced by the political economy, power structure, and history of the place. Multiple aspects, such as stakeholders, governance, and legislations, are associated with shared use of school environments (Zamanifard et al., 2018).

The concept of educational urbanism and the “learning city” by the UNESCO Institute for Lifelong Learning emphasizes improving inclusivity and equality through accessible education and views the city itself as a community-based learning space (UNESCO Institute for Lifelong Learning, 2015, p. 3). However, this often limits collaboration to school boundaries and lacks urban planning integration.

In urban planning and design texts, limited attention is given to the practices of “fencing-off” schools, which reinforce the separation between schools and the local community (Brantlinger, 2018). This enclosure reflects a wider trend of corporatization and privatization. Various urban initiatives recognize schools as a pivotal institutional infrastructure at the core of neighbourhoods, but the integration of schools as shared

spaces within their community area has not been extensively explored. The historical disjoint between school planning and city planning suggests a missing institutional framework for multi-agency collaboration (Vincent, 2006). The “shared space” debate in urban planning offers insights into positioning school space for sustainable communities.

Duncan (2021), Yarker (2021), and Barr et al. (2021) evaluate the efficiency of shared space projects in fostering community, quality of life, and safety. The sharing narratives extend to various types of spaces and include agreements between entities for wider community access to facilities (ChangeLabSolutions, 2018). This reflects the popularity of multifunctionality and collaboration, but often lacks design strategies. Cleveland et al. (2023) adopted the view that schools and urban infrastructure, including buildings and landscaped outdoor areas, matter in the context of school–community relations. Likewise, Miles et al. (2023) proposed a network model to represent relationships between schools and community infrastructure, to have more efficient models of infrastructure provision for community use, especially in areas where demand for community services and infrastructure is high but resources are limited. A mixed-use of educational spaces presents new opportunities for rethinking the dense urban environments and for understanding schools as social infrastructure (Boys & Jeffery, 2023). This research argues for such a systemic approach to redefine schools as an integral part of local neighbourhoods, enhancing social life and community wellbeing.

3. Methodology

3.1. Methods

A systematic literature review was conducted to explore the concept of “shared school space” in terms of purpose, governance, planning, and design decisions using the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) method (PRISMA, 2024). This approach ensured a transparent and replicable review process, building knowledge from existing work on a narrow topic and allowing for an evidence-informed review of policy and practice (Thomas & Harden, 2008)—see Figure 1. Round 1 involved defining a keyword string related to shared space terminology, which was tested in discipline-specific databases (see Table 1). The search was filtered to include scholarly articles only, initially resulting in only a small number of relevant studies. To improve the process, a Round 2 keyword string was compiled, adding the terms “joint use” and “shared use,” generating a sufficient number of studies (Table 1). Filters were applied to narrow the search to abstracts and scholarly articles only. This process resulted in 218 studies appropriate for screening after removing the duplicates (Figure 1). Databases were selected based on previous systematic studies (Harzing & Satu, 2016; Martín-Martín et al., 2021) using ProQuest and Scopus, among others. While Google Scholar was noted for its high volume but low precision (Gusenbauer & Haddaway, 2020), ProQuest and Scopus provided reliable results. Following this, a two-stage screening process was conducted. Titles and abstracts were initially screened for relevance, followed by a full-text assessment based on predefined criteria. Data extraction captured key information, and quality assessment was conducted using adapted CASP criteria (CASP UK, 2024). The search results are summarized in Table 1, showing 27 relevant publications included for detailed analysis.

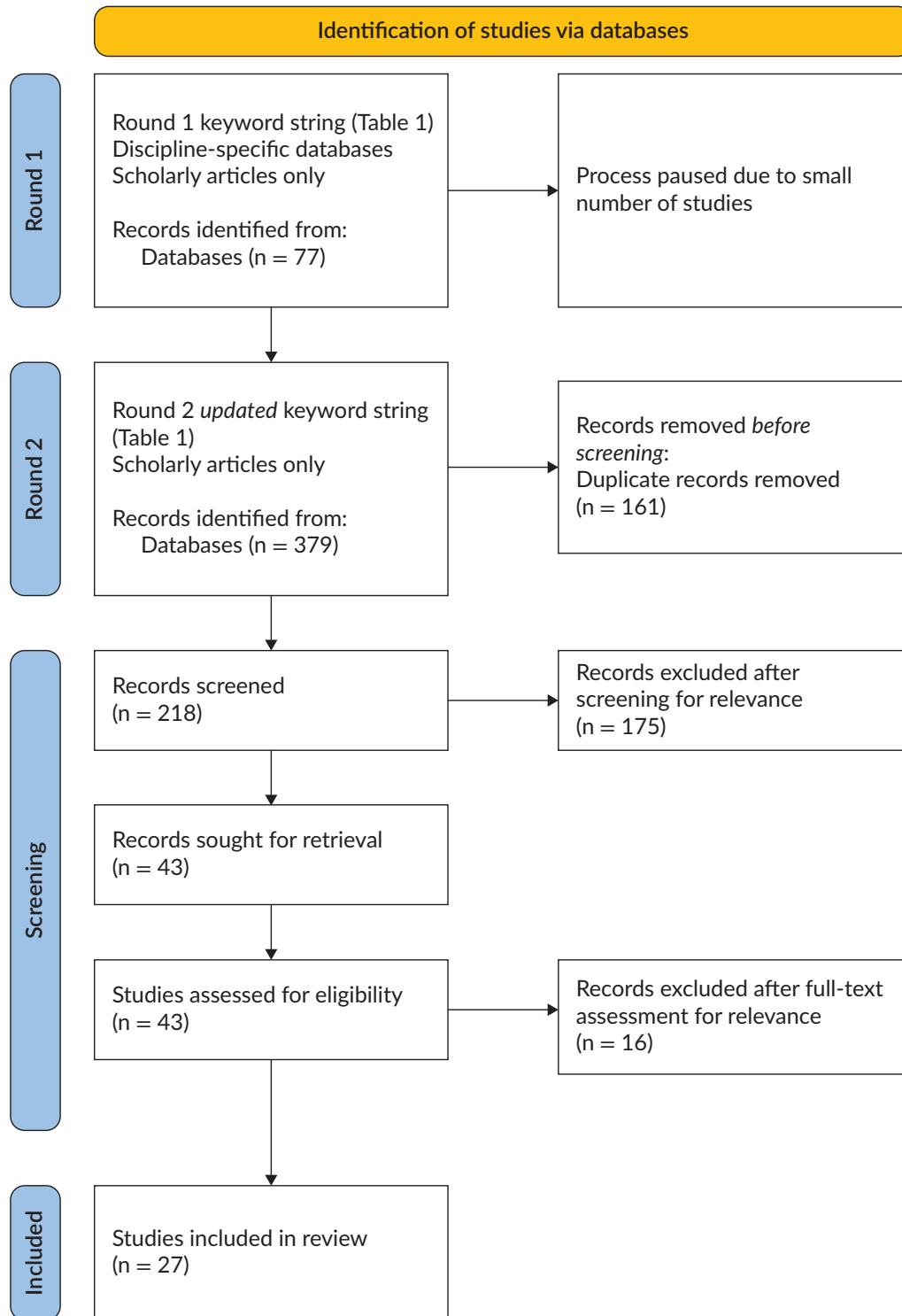


Figure 1. PRISMA diagram for systematic reviews. Source: Page et al. (2021).

Table 1. Description of keyword string and search results.

Keyword string	Filter	Databases	Results	Relevant
Round 1				
"share space*" OR "shared space*" OR "shared use*" OR "shared school space" AND "school* infrastructure" OR "school ground*" OR "school space*" OR "school design" OR "education* infrastructure" OR "education* space*"	Scholarly articles	ProQuest in Built Environment	33	2
		ProQuest in Education	10	1
		Taylor & Francis in Education	25	3
		Business Source Premier in Education	2	0
		Scopus in Social Sciences	7	3
Round 1 Total			77	9
Round 2				
abstract ("share* space*" OR "share* use*" OR "joint use") AND abstract ("school* infrastructure" OR "school* ground*" OR "school* space*" OR "school*" OR "education* space*" OR "education* infrastructure")	Scholarly articles	ProQuest	220	21
		Scopus	134	17
		Taylor & Francis	9	2
		Business Source Complete	16	3
		Sage Journals	0	0
Science Direct	0	0		
Round 2 Total			379	43
Studies included in the review after screening and assessment for relevance (see Figure 1)				27

4. Results

Almost one-third of the publications ($n = 9$) discussed strategies for shared use of school spaces. Five publications focused on barriers associated with implementing shared school strategies. Another five publications investigated general characteristics of shared or joint use agreements to understand differences in approaches in relation to contextual and demographic characteristics. One of the publications generally discussed the costs and benefits associated with the initiative. Another publication presented a general review of school and municipality agreements. Three publications brought attention to the intersection between shared or joint use and urban planning matters. The discussions from the literature will be presented in more detail below. The discussion is organized in relation to definitions, areas of focus, benefits, barriers, and proposals for moving forward. Table 2 includes the publications used in the systematic review under different barrier themes identified and the key contributions of publications, which are further explained in this section.

4.1. Definitions and Purposes

In defining schools as shared spaces, the concept was frequently intertwined with other terminologies such as "shared use" or "joint use." Talmage et al. (2018) defined it as "a strategy implemented by schools and districts," for what Young et al. (2014, p. 1586) described as "opening school buildings and grounds during non-school hours for community use." All other studies agreed with the definition of shared school space to provide community access to school facilities. For instance, Jones and Wendel (2015) specify: "Joint use or shared use of public-school facilities provide community access to facilities for varied purposes." Within this context, it was evident that there is a distinct and defined purpose, timeframe, and arrangement that can differentiate

shared use or joint use from the earlier discourse on shared spaces. In Australia, the federal government's attention to sharing school infrastructure with local communities has a broader social purpose than health: to support community building. However, this is once again conceptually limited to "use." Therefore, despite the inclusion of terms such as "shared space" as a primary keyword, the studies identified through the search

Table 2. Barrier themes and key contributions identified through the systematic review of publications.

Barrier themes	List of references	Key contributions
Definitions and purposes	Burbage et al. (2014); DeFosset et al. (2016); Lau (2012); McShane (2012); Spengler et al. (2011); Vincent (2014); Young et al. (2014)	Shared school space as a strategy to provide community access. Shared spaces have a distinct and defined purpose. Benefits cover multiple domains of health, community cohesion, and others. American and Australian approaches differ.
Levels of success and contextual variances	Burbage et al. (2014); Jones and Wendel (2015); Kanters, Bocarro, Filardo, et al. (2014); Lafleur et al. (2013); Omura et al. (2017); Spengler et al. (2011); Yu et al. (2022)	Lower participation of schools in shared and joint use programs. School facilities are under-used by communities despite having access. Variances in access to school spaces in urban, inner city, fringe, and rural locations. Shared space and joint use programs in the United States focus on improved community health and recreational facilities.
Managerial, liability, and communication challenges	Chace and Vilvens (2015); Kanters, Bocarro, Moore, et al. (2014); Maddock et al. (2008); McShane (2012); Spengler et al. (2011); Spengler et al. (2014); Spengler et al. (2007); Talmage et al. (2018); Turner et al. (2018); Winig et al. (2015)	Maintenance and liability of shared spaces are significant barriers. The framing of managerial and legal considerations could be approached through a risk lens.
Program, participation, and engagement	Carlton et al. (2017); DeFosset et al. (2016); Howard et al. (2013); Talmage et al. (2018); Young et al. (2014)	Case-specific strategies are required to overcome the barriers. Community participation is important for community building and effective utilisation of these spaces. A participatory program planning, hard infrastructure, and an aligned planning process would be required for its success.
Governance	Lau (2012); McShane and Wilson (2017); Omura et al. (2017); Stasi et al. (2020); Vincent (2014)	Governance strategies differ for indoor and outdoor facilities of schools. Informal processes have managerial and liability issues compared to formal processes. Alternative ways of governing assets, such as multi-agency partnerships, are required.

do not define the topic from a perspective other than that of an established agreement for a purpose of use. Overall, there is limited attention paid to a conceptual framework in reassessing schools as “shared spaces.”

Most studies focused on the health benefits purpose associated with schools’ shared use agreements (e.g., Burbage et al., 2014; DeFosset et al., 2016; Lau, 2012; Vincent, 2014). This purpose is linked to the programs and initiatives of medical and health associations from which studies originate (Omura et al., 2017), even though it is recognized that benefits go beyond the health and wellbeing of children and young people, to also include community cohesion (Spengler et al., 2011). Young et al. (2014, p. 9) pointed out that the emergence of shared use agreements for public health purposes in America has been due to the acknowledgement of health issues among young people, the “great availability of schools in communities and their importance as a place for physical activity,” and the government’s recognition of the need to share such public infrastructure in challenging economic contexts and rising population numbers and demand. Somewhat differently in Australia, the earlier federal program Building the Educational Reform had broader economic and social purposes to the spending in school infrastructure for community building and identified the importance of enhancing investment value. The concept behind “shared school,” as McShane (2012, p. 106) described, was to “recast civic engagement in educational terms, bringing children, families and community members within a project of learning and community building.” While there is attention given to community building, there is limited reference to a broader “shared space” concept to improve spaces of conviviality and encounter, and spaces of shared meaning.

4.2. Levels of Success and Contextual Variances

A common thread observed across all the studies was the varying degrees of low participation of schools in shared or joint use programs, both at the national and state levels, along with limited adherence to the program’s scope of work (Spengler et al., 2011). For instance, Yu et al. (2022) analysed the use of school recreational facilities (indoors and outdoors) between 2018 and 2019, based on a random selection of 19 public high schools in a non-specified district in the United States. By applying the System for Observing Play and Recreation in Communities and seven different variables (accessible, usable, equipped, supervised, organised, lighted, empty), Yu et al. (2022) found that while facilities were accessible 53.4% of the time, they remained empty 91% of that time. Therefore, despite existing programs and relative accessibility, school campuses remain underused, especially for community physical activity.

There were also contextual variations. Omura et al. (2017) indicated that, in 2014 alone, 4 in 10 municipalities in the United States reported having a shared use agreement. Findings from their compilation and analysis of existing shared school space and use agreements revealed tendencies in the country, with a lower prevalence among municipalities with small populations, lower education levels, and located in the South. Jones and Wendel (2015) further indicated that most districts with a higher percentage of joint use agreements are in the urban fringe or larger city centres, while rural and remote areas, which often have lower resources, showed a more limited uptake of the initiatives. In North Carolina, Kanters, Bocarro, Filardo, et al. (2014) found that schools in low-income and Black communities were less likely to share their facilities. Contextual variations were also evident in studies conducted in California (Burbage et al., 2014; Lafleur et al., 2013). Therefore, while most joint use agreements have shared a common goal of enhancing community health by providing improved access to open spaces and recreational facilities, there are different levels of adherence and success in relation to contextual qualities which deserve further analysis.

4.3. Managerial, Liability, and Communication Challenges

The literature consistently inferred the main barriers and challenges to shared use or joint use of school facilities. These included concerns regarding liability, maintenance, vandalism, crime, scheduling conflicts, and the associated costs and operational aspects (Chace & Vilvens, 2015; Spengler et al., 2011, 2014, 2007; Talmage et al., 2018; Turner et al., 2018; Winig et al., 2015). Of those, maintenance and liability barriers were seen as the strongest barriers for schools to share their spaces with communities. The framing of managerial and legal considerations could be approached through a risk lens. Doing this brings focus to concerns on risks that students may face while sharing the school space. As such, Spengler et al. (2007) asserted that schools need to develop a strong understanding and awareness of legal considerations to deal with liability and managerial issues involved in shared use, achieved through a collaborative effort between research, legal assistance, and advocacy (Spengler et al., 2014). Chace and Vilvens (2015) showed most joint use programs still rely on informal agreements. Like the recommendation by Spengler et al. (2007), Chace and Vilvens (2015) also indicated that there needs to be a more centralised governmental strategy to define liability and managerial issues.

Considering the intended benefits and managerial barriers associated with the shared use of school facilities, Kanters, Bocarro, Moore, et al. (2014) published a cost-benefit analysis of 30 public middle schools in North Carolina, associated with a specific shared agreement program. The shared use was evaluated by the number of after-school programs and number of participants, measured against the costs of maintenance and management of the facilities. However, the costs did not differ between outdoor and indoor facilities. Nonetheless, the study indicated that there was no significant increase in the costs of operating the after-school programs, suggesting the potential for schools to be more open to such programs for the health benefits of local communities.

Differently, Maddock et al.'s (2008) study on the In-Motion program implemented in schools in Honolulu, Hawaii, revealed that while the initial pilot phase achieved short-term success, this did not follow through the continuance of the program. As indicated, the initial success was primarily attributed to effective stakeholder communication and program adaptation based on local community feedback, whereas sustained engagement relied heavily on word-of-mouth promotion. McShane (2012) also emphasised challenges with identified levels of engagement with the community and criticised that in the context of the Building the Educational Reform program in Australia, engagement was limited to "use" rather than involving adequate consultation processes, particularly considering that the wider purpose of the program was not only for health promotion, but for community building and improved use of public investment in schools as community infrastructure.

4.4. Program, Participation, and Engagement

Reflecting some of the mentioned barriers, several studies proposed specific strategies to overcome the barriers hindering the success of shared use agreements in schools. Some authors focused on programmatic strategies to improve the shared use of school facilities. Carlton et al. (2017) pointed to the need to include structured physical activity programs, while DeFosset et al. (2016) suggested the need for associated incentives for children and young people to use the facilities for physical activities. Turner et al. (2018) also suggested that active promotion of school shared spaces is needed to overcome barriers from community perceptions and lack of interest. These latter suggestions are focused on the purpose of using school

recreational and sports facilities to improve opportunities for health and wellbeing. However, McShane (2012) indicated that the focus on “use” to involve communities in local schools, particularly with the purpose of “community building,” has limitations and higher levels of participation are required to embed programs and other strategies in community needs.

Some authors added that, beyond communication, shared school programs need to rely on appropriate participatory strategies. For instance, Young et al. (2014), Howard et al. (2013), and Talmage et al. (2018) considered broader community uses beyond physical activities for health and wellbeing. Warner and Zhang (2023) interpreted such a collaborative approach to shared school space as a more effective “power with” process than “power over” policies and budget control from authorities, also suggesting a participatory program planning process between different stakeholders, including families and seniors. Specifically, Young et al. (2014) added hard-infrastructure dimensions, claiming that, beyond managerial and liability arrangements and program planning, schools need to be designed in ways to facilitate the reality of shared use.

4.5. Governance

Within the studies on shared school spaces in this review, there was a limited review of governance strategies to enable shared school spaces or specifically shared use. The few studies approaching this topic discussed formalities of agreements, partnerships, and differences in levels of agency involvement.

The findings of Omura et al. (2017) revealed differences in strategies for indoor and outdoor facilities of schools. They identified that shared use agreements for indoor sports facilities tend to be governed by formal processes, whereas the joint use of outdoor recreational facilities is more commonly established through informal arrangements. However, informal processes are evidently more open to managerial and liability issues (Jones & Wendel, 2015; Omura et al., 2017).

Some studies considered the issue of governance from a parks and recreation services perspective (Lau, 2012; Stasi et al., 2020). Lau (2012) proposed that agencies should focus on alternative ways of providing such services to communities beyond the acquisition, ownership, and isolated management of usually large assets, by forming multi-agency partnerships. The joint use of school facilities was analysed as one of these alternatives. Lau (2012) further suggested the need for partnership and coordination to be formed in the early phase of planning. However, he recognized the challenges with negotiations and the ability of different parties to compromise in new arrangements. Stasi et al. (2020) examined the shared use of park facilities between schools, churches, and parks, and, in line with Lau (2012), suggested partnership and improved communication are vital in enabling the best use of park spaces by the community to improve public health.

From an urban planning perspective, Vincent (2014) identified three types of joint use agreements: basic joint use, joint development for joint use, and joint use partnership. These relate to basic community use of facilities, strategies to renovate schools for joint use, and formal relationships and policies for long-term joint use, respectively. The research validated the challenges with stakeholders reaching agreements. Vincent (2014) suggested that further research is needed to assess the impact of state policies on joint use, cost awareness, and a better understanding of the wider social benefits of joint use to local communities. McShane and Wilson (2017) further extended the debate to the specific context of urban schools and

indicated the alignment between urban and education policy challenges and priorities, although a disconnect between responsible institutions and governance.

5. Discussion

The systematic review reveals that the study of shared school space is under-researched in urban planning and design, with most relevant literature coming from medical and health sciences, focusing on youth health programs in the United States. It's suggested that future studies could broaden the scope by including concepts like "integrated design" rather than just shared space. Shared school space is primarily seen through shared or joint use agreements, but this has limited reach. It is not only about sharing but optimising the space. In this sense, there is a need to rethink the concept of shared school space and its use to position schools as part of social infrastructure and to enhance the multifunctionality of these shared spaces through integrated design approaches. A consistent theoretical framework is lacking in the literature to critically analyse shared school space, highlighting the need for a critical view of shared use, the role of schools as public facilities, and various identified issues like definitional, managerial, contextual, and fragmentation challenges.

5.1. Definitional Issues

"Shared use" in schools involves agreements between schools and third parties, setting specific rules and timeframes for space usage, differing from the broader "shared space" concept which aims to enhance public life and social encounters with fewer regulations. Shared use is about formal arrangements for facility use, whereas shared space in urban planning values spaces like streets, offices, or parks as assets for all. The current focus on shared use, primarily for health and wellbeing, overlooks the potential of schools as local urban infrastructure for broader community benefits, a concept suggested by Vincent (2006). This lack of planning perspective results in the absence of policies that reconceptualize school spaces for community use. The distinction between shared/joint use and shared space is crucial for framing urban planning initiatives. Policies inspired by the shared space concept could integrate schools into urban planning, considering spatial implications. The Share Our Space program by the NSW Department of Education could expand to include more spatial considerations in collaboration with other urban infrastructure departments. Future urban planning studies should apply a critical theoretical framework to explore shared school space beyond current practices, emphasizing the need to reconceptualize school spaces like playgrounds and green areas for greater community benefit.

5.2. Managerial Issues

The review underscores the importance of both formal and informal agreements for the community use of outdoor school spaces and recreational facilities after school hours. These agreements should cover aspects like injury prevention, legal coverage, and collaboration, essential for effective space sharing. Collaboration is key in defining and managing shared spaces, as noted by Warner and Zhang (2023), and is critical for the success of programs. The participatory process, emphasized in urban planning for building democratic communities and social sustainability (Choguill, 2008; Dempsey et al., 2011; Perry, 2013; Woodcraft et al., 2011), should be integrated into these discussions. Additionally, examining these concerns in the context of other public facilities is beneficial. If schools are designed with a shared space perspective from the start, issues like liability and maintenance can be more effectively addressed in the planning stages.

5.3. Purpose Issues

The literature review indicates that the primary motivation for shared use agreements between schools and organizations is the health benefits for local communities. However, recent studies reveal the multifaceted advantages of shared school spaces, positioning schools as vital components of the urban landscape. The accessibility of open spaces and recreational facilities in schools, due to their location and proximity, offers significant benefits to communities beyond health, including social inclusivity. These advantages stem from the inherent educational qualities of schools and their role as public facilities, not just from specific programs and organizations. This reimagining of school spaces calls for a multidisciplinary approach to planning, design, and management, aligning with city planning ideals that promote social cohesion in local residential areas, with schools acting as community hubs and meeting points.

5.4. Contextual Issues

School spaces, as micro-publics and key community nodes, have been underexplored in research, despite acknowledgments from theorists like Perry (2013) and Choguill (2008) about their significant role in neighbourhoods. This concept aligns with urban design movements like New Urbanism, suggesting schools as potential neighbourhood centrepieces due to their attributes conducive to community interaction and participatory activities. These ideas warrant further exploration within urban planning to understand the practical aspects of shared school spaces in neighbourhoods. This exploration is crucial for informing design decisions that position schools as vital community infrastructure and nodes within broader environmental, city, and state contexts.

5.5. Fragmentation Issues

The literature review reveals a scarcity of studies on shared school space, particularly from an urban planning and design perspective, with limited focus on schools beyond their educational roles. Three key considerations emerge: Firstly, more research and theoretical input from city planning is needed on the social role of public schools, considering their potential for fostering social inclusivity and social capital, in addition to health and wellbeing benefits. Secondly, the application of urban integration principles to schools warrants further exploration. This includes critically examining assumptions about the inherent social benefits of such infrastructure, as discussed by Gehl (2011) and Jacobs (1961), and reconceptualizing these spaces for enhanced shared use and benefits. And thirdly, a multidisciplinary planning approach, integrating educational and spatial disciplines, is essential to expand the function and purpose of schools beyond education. This holistic approach is vital for leveraging schools as shared spaces for community building and health benefits.

6. Conclusions: “Shared School Space” in City Planning and Community Shaping

Historically, schools have been some of the most underutilised assets in Australia, with many used sparingly outside of school hours or on weekends (Cleveland, 2016). This research supports the concept of shared school space in Australia and emphasizes the need to explore current approaches, challenges, and opportunities. It advocates for the “schools beyond schools” approach, positioning school spaces as crucial infrastructure for enhancing the sense of community within local neighbourhoods. The systematic review reveals limited

research from an urban planning and design perspective, identifying legal, managerial, and contextual barriers to shared school spaces. Yet, it underscores the importance of integrating schools into the broader urban fabric as focal points for sustainable community development.

School spaces, given their location, distribution, and proximity to communities, are integral to city and community shaping. Schools should be central to green space planning, reconceptualizing them as community-shared spaces. Economic, environmental, and social factors should be considered in advocating for schools as shared community resources. Leadership and evaluation are crucial to determine what types of facilities should be built on school sites to support the education, health, and wellbeing of young people and the wider community (Cleveland, 2023). Leadership would also be crucial to challenge (and enhance) current planning approaches to realise the benefits of shared school infrastructure which would extend beyond students to the entire community. Such leadership would necessitate an interdisciplinary approach to embed schools into the social infrastructure of urban planning. As cities face development pressures and population growth, rethinking the use of public infrastructure, including school spaces, becomes imperative for community benefit. This shift in urban planning calls for a new understanding of schools as community hubs, not just educational spaces. This is an emerging concept, and integrating its links to urban and community planning would be beneficial. It could take time to become an established practice in Australia, especially considering the multiplexity to embed schools as community hubs.

Future research should explore the concerns of parents and educators about student safety, public access to schools, and how participatory design with school staff and educators for shared use could be included in existing schools and at the design stage of new schools. Research should investigate specific school design and planning considerations for student access and safety and how governance issues associated with maintaining school environments could be shared with the public. It would be important for government educational authorities and schools to develop an in-depth understanding of infrastructural, spatial, and sociological differences between primary and secondary schools and location-based inner-urban, suburban, and rural schools where variations in densities and urban morphologies shape the availability of school open spaces. Schools incorporating nature through pedagogy further promote community involvement through stewardship activities that address provisioning, supporting, and cultural ecosystem services which further promote social cohesion (Hron, 2023).

These cumulative benefits highlight the growing importance of the shared space agenda in optimizing resources and public welfare. It identifies gaps in both school infrastructure and city planning, advocating for a broader discourse beyond shared or joint use. This perspective, as McShane and Wilson (2017) observed in Victoria, should move beyond functional relationships within school grounds to integrate schools within urban planning. A collaborative approach between education and planning disciplines, spearheaded by local government urban planners, can reframe the debate and enhance the potential of schools to contribute to resilient urban futures.

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Conflict of Interests

The authors declare no conflict of interests.

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