Joint Use between Communities and Schools: Unpacking Dimensions of Power

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Abstract
What explains the level of joint use service delivery between communities and schools? Using a 2019 nationwide survey of 996 US local governments, we assess the community level factors that lead to more joint use services with schools. These include services for children (child care, child nutrition for evenings, weekends, summer), adults (adult education, nutrition programs, school buses to transport seniors), and the entire community (recreation and health care services for all ages). We identify key factors that differentiate more joint use services. We measure two types of power – hierarchical *power over*, and horizontal *power with*. We find *power with* (partnership and formal joint use agreements) is more important than *power over* (local government siting and budget control over schools). We also find engagement of families and seniors in the planning process can lead to a common vision, and this also leads to more joint use services with schools

Key words: joint use, power, schools, community development

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Introduction

Schools are critical community institutions. In addition to their educational role, schools can be used as centers for access to recreation, nutrition, adult education and health care (Filardo & Vincent, 2014; Filardo, Vincent, Allen, & Franklin, 2010; Vincent, 2010, 2014). The community schools movement and promise neighborhood initiatives have been growing in some urban areas (Bonilla-Santiago, 2020; Horsford & Sampson, 2014; Kelleher, Reece, & Sandel, 2018; Miller, Wills, & Scanlan, 2013), but little is known about the level of school-community collaboration across suburban and rural communities. This study provides an analysis of both rural and urban communities across the US.

Schools often exist as silos onto themselves. But that is changing. Both schools and local communities are recognizing the need to work together to achieve both educational and broader community development goals (Filardo et al., 2010; Schafft, 2016; Talmage, Figueroa, & Wolfersteig, 2018). Community development requires collaboration across a range of institutions and issues. Cross-agency collaboration has been shown to be especially important in ensuring a broad range of services to meet the needs of children, families and seniors (Warner & Zhang, 2020, 2021). Collaborative governance (Ansell & Gash 2008) is receiving increasing attention in community development and public health (Kania & Kramer, 2011; Walzer, Weaver, & McGuire 2016), but more research is needed on the nature of power in these collaborations. This study helps fill that gap.

Organizational structure and power matter for school-community collaboration. In most communities, schools are special districts with boards and taxing authority independent of local government. Schools have a large number of highly trained staff, and buildings that can be key community resources. In most communities, local governments have no formal budget or administrative control over schools. Thus, collaborative governance is the typical approach to analyze joint use services with schools (Bierbaum, et al., 2022).

What constitutes joint use? Research on joint use service delivery between communities and schools has focused on planning (Filardo & Vincent, 2014; Filardo et al., 2010), access to recreation (Spengler, Young, & Linton, 2007), and other school resources for the broader community (Talmage et al., 2018; Vincent, 2010, 2014). This can involve sharing computer and library resources, access to adult education, support for health and nutrition services (for children and seniors), and recreation (sharing gyms and ball fields). While schools typically focus on serving children during the school day, they can be an important resource for services for children and families outside of school hours. Schools also can be a resource for seniors. For example, in NYC, school buses are used to take seniors grocery shopping in neighborhoods that lack grocery stores (New York Academy of Medicine, 2011). Nutrition access has become a key focus of schools (Flora & Gillespie, 2009), with breakfast and lunch during the school day, and some schools offer evening meals and send food back packs home with children on weekends. Some schools provide school based health care centers (Knopf et al., 2016). These are especially important in low income and rural schools where access to health care is a challenge (Kjolhede & Lee, 2021).

In this paper we look at factors that differentiate communities with more joint use service delivery with schools. We use data from a 2019 survey of 996 local governments across the US. We measure seven different services, in the areas of recreation, education, health and nutrition, child care and transportation. These are services which would be of importance to children and

seniors. We also control for factors that might promote joint use and obstacles to collaboration. We give special emphasis to forms of power in the organizational context for school-local government joint service delivery.

Theoretical Basis of Collaborative Governance

Collaborative governance theory emphasizes the importance of trust and shared understanding to lead to more collaborative action (Ansell & Gash, 2008; Ostrom 2010). Attention must be given not only to the incentives and constraints for collaborative action, but also the legal and administrative practices which set the context for power sharing and collaboration (Lynn, Heinrich & Hill, 2001). Collective impact theory emphasizes the need for an organizational infrastructure to support collaboration (Kania & Kramer, 2011; Walzer, Weaver, & McGuire 2016). We explore these factors, but give special attention to types of power that may affect joint use service collaboration between communities and schools.

First, we draw insights from community development theory to understand some of the factors that lead to more school-community service sharing. Emery and Flora (2006) and Flora and Gillespie (2009) have articulated the community capitals framework - with a focus on political, social, cultural, financial, physical and human capital – particularly as it relates to community development and health. Schools represent all six community capitals. They have excellent physical buildings and playgrounds, and relatively stable financial resources from local taxing power and state aid. In many communities, schools are the largest employer, so they have excellent human capital. They are important non-partisan leaders in local communities, and they build the social, cultural and human capital of the community and future generations. Prior community development research has looked at the role of schools in building social capital Israel & Beaulieu, 2004; Warner, 1999), sense of community and place (Lyson, 2002; Sipple, Francis, & Fiduccia, 2019), and youth engagement in local planning processes (McKoy & Vincent, 2007).

Community development scholarship gives special attention to the importance of developing a common vision with schools (Biddle, Mette, & Mercado, 2018). This can help address power imbalances. Common vision is particularly important in communities where there are divides by race, age and class (Myers, 2015). Visioning is important for intergenerational programming in schools (Kaplan, 2002). Participation of families with children (Makarewicz, 2022; Warner & Rukus, 2013) and of seniors (Warner, Homsy, & Morken, 2017), has been shown to be particularly important in helping communities plan for their needs. Children's engagement in community visioning is especially important in disadvantaged communities, as children provide a unique view (Driskell, 2017; Severcan, 2015). In rural communities, social engagement has been found to be more important than the built environment in differentiating communities with better health (Zhang, Warner, & Wethington, 2020). This is why both UNICEF (2018) and the World Health Organization (WHO, 2007) emphasize the importance of engagement and respect in creating more child and age friendly cities.

There are many challenges to promoting joint use with schools. Liability concerns are commonly reported in the literature (Spengler et al., 2007). Finance can be another issue, though some schools view joint use as a way to raise extra funds (Center for Cities and Schools and 21st Century School Fund, 2014). One of the main challenges is that schools can act as separate, single purpose institutions in the community. This silo-ization is a problem, but many local governments are working to create cross-agency collaboration with schools to meet the needs of children and seniors (Warner & Zhang, 2020, 2021). For example, community planners are

giving increasing attention to schools. A 2008 national survey of planners found almost half reported working with their school board (Israel & Warner, 2008). The survey found that 37% of survey respondents collaborated with the school board to reuse old buildings and 59% of respondents reported that schools function as the center of their communities. When asked about the most significant challenges to planning for family-friendly communities, they reported lack of voice for families (65%), and lack of authority (53%) (Israel & Warner, 2008). Local government planners have worked with schools, through joint planning, to promote investment and institutionalization (McKoy, Vincent, & Bierbaum, 2011).

Local governments play a crucial role in planning, service delivery, and promoting cross-agency collaboration to serve the needs of children and seniors (Warner & Zhang, 2019). School-community collaboration is just one form of shared service delivery. There is a wide body of research on inter-municipal cooperation, which finds shared services are an important means to improve quality and access to public services (Hefetz, Warner, & Vigoda-Gadot, 2012; Warner, 2011). Research on local government shared service agreements finds they are longer lasting when they focus on service quality, not just cost savings, and when they have formal organizational structures to support service sharing (Aldag & Warner, 2018, Aldag, Warner & Bel, 2020). Experience builds trust, and formal agreements help maintain shared services over time.

Elinor Ostrom's (2010) work on community collective action emphasized the importance of trust, networks, norms of reciprocity and experience over time. But Ostrom's work gives little attention to the role of local government, or mechanisms to address power differentials. Ansell and Gash (2008) bring government into collaborative governance theory, emphasizing the role of facilitative leadership and institutional design. Collective impact theory also addresses the role of local government in the attention it places on an organizational structure to support cross-agency collaboration. It emphasizes the importance of a common agenda which is built from a process of engagement, communication and common measurement (Kania & Kramer, 2011; Walzer, Weaver, & McGuire, 2016). Such collaborative governance can facilitate engagement that brings in marginalized voices and can lead to a process to promote equity in community services (Reece & Gough, 2019).

Community development scholarship recognizes the importance of power differentials between communities and schools (Biddle et al., 2018). Schools are an important anchor institution which can help build social capital networks and collective civic identity (Clopton & Finch, 2011). Attention must be given to both horizontal and hierarchical power in bonding and bridging networks (Flora, Flora, & Gasteyer, 2016; Warner, 1999). This is especially important in collaborative governance networks where there are strong anchor institutions involved, such as schools. Clopton and Finch (2011) raise concerns about the type of power these social anchors hold in community networks. To address this concern, we differentiate hierarchical and horizontal forms of power. Ostrom (2010) focuses primarily on horizontal power, arguing that collaborative community networks require trust and norms. Similarly, communicative planning theory points to the power of dialogue, networks and institutional capacity (Innes & Booher, 2004). But collaboration must pay attention to both horizontal and hierarchical power. This is why both collaborative governance and collective impact theory also focus on the institutional arrangements that form the context for the collaboration (Ansell & Gash, 2008; Kania & Kramer, 2011; Walzer, Weaver, & McGuire, 2016). In this research we develop measures for two types of power in the organizational context: hierarchical "power over" and horizontal "power with."

We are interested in examining if the differences between types of power can help explain differences in the level of joint use services with schools.

> *Power over*: Schools have a lot of power in local communities, but few communities have power over schools. In some districts the local government has power over school siting and financial power over school budgets. We control for these measures to see if communities with more siting and budget power over schools have more shared services.

> *Power with*: When communities share power with schools, they use them for information dissemination, partnerships and they develop formal agreements. These help lay the foundation for shared services and much work has been done on how to structure such agreements (Testa, 2001). We control for local governments which use schools as partners for information dissemination and which have a formal joint use agreement, to see if these organizational relations are associated with higher levels of joint use services.

Community development theory emphasizes collaborative power for action, and thus we want to test if horizontal *power with* leads to more joint use with schools than our measures of hierarchical *power over*. This is the first study of joint use services to make that theoretical distinction and it contributes to the call for more research on how *power over* and *power with* are connected (Westin, 2022).

Data
We designed a survey to assess the community level factors that lead to more joint use services with schools. We collaborated with the International City/County Management Association (ICMA) to send the *Planning for all ages* survey to city and county managers across the US in 2019. The survey sample frame included all counties and all municipalities over 25,000 population, and a one in three sample of municipalities under 25,000, and a one-in-2.5 sample of towns and townships over 2,500 in population for a total of 8016 local governments. T tests show that the total population in the survey sample is similar to the universal sample. The two-sample Kolmogorov-Smirnov test shows the sample captures more larger places. Survey respondents are from all four regions of the US and there are few significant regional differences.

Survey questions measured the number of services offered through joint use with schools, our dependent variable in this analysis. The survey also asked a set of questions about the organizational forms of collaboration between schools and local governments in providing information, facilities and services, our measure of "power with," and local governments' planning and budget control over schools, our measure of "power over." Factor analysis was used to differentiate our dependent variable, joint use services, from collaboration between local government and schools in information sharing (power with), and local government's planning and budget power over school (power over). The survey also measures factors which collaborative governance and collective impact theory suggest will differentiate communities with more joint use services. These factors include: engagement of families with children and seniors in planning for their needs, the level of common vision among seniors and families with children in the community, trust that families with children and seniors have in their schools, and barriers to shared services such as liability, regulations, opposition, and school quality. We linked the survey data with socioeconomic data from the American Community Survey (2015-2019) (U.S. Census Bureau, 2021).

School joint use services
The survey measured seven services offered jointly with a community's public schools (Table 1). Child nutrition is the most common service provided by a community's public schools (46%). About a third of communities have joint use services with schools to provide childcare (35%), recreation programs for all ages (33%), and adult education services (32%). A lower percentage of communities have senior-related joint use services, including nutrition programs/meals for seniors (23%), and school buses used to transport seniors (12%). Only twelve percent of public schools have healthcare services for all ages. We added up all the services to create the joint use service variable (alpha 0.62).

Table 1 Joint use services

Joint use services with schools	Percent
Child nutrition for evenings/weekends or summer	46%
Child care services	35%
Recreation programs for all ages	33%
Adult education services	32%
Nutrition programs/meals for seniors	23%
School buses used to transport seniors	12%
Health care services for all ages	12%
N	996
Mean	1.93

Data source: Planning for all ages survey 2019. 996 US cities and counties

Horizontal Power with
Power with measures the organizational nature of collaborative relations between local government and schools in terms of ***formal joint use agreement, partnership,*** and ***information.*** The ***formal joint use agreement*** measures whether the local government has any joint use (or similar) agreements or with schools, and whether schools and the local government share facilities. Survey results show that 56% of communities have a formal joint use agreement, and 57% of communities have shared facilities. ***Partnership*** measures whether the school district engages with the local government in cross-agency partnership to serve children or seniors, and ***information*** measures whether the local government works with schools to deliver information and services. Schools are commonly engaged in cross-agency partnerships (51%), and information delivery with local governments (66%).

Hierarchical Power over
Power over measures if the local government has authority over siting and budget control over schools. ***School siting*** measures whether the comprehensive plan considers schools or school siting, and whether the local government participates in school district educational facility planning. Survey results show that 31% of communities have a comprehensive plan which addresses school or school siting (31%), and 35% of local governments engage in school facility planning. ***Budget control*** measures whether the local government has tax or budget control over schools. Only 17% of local governments report having budget control over schools.

Planning and participation
To get a sense of the broader community context for collaboration, the survey measures whether the community's comprehensive plan addresses the needs of families with children, or seniors. Survey results show that 40% of communities have a comprehensive plan addressing the needs of families with children (***planning for children***), and 43% of comprehensive plans address the needs of seniors (***planning for seniors***).

Participation is an important element in collaborative governance theory and our survey includes measures of public engagement and political engagement. The survey asked about the level of engagement for children, youth, and seniors in planning for their needs. The engagement of each age group is measured on a scale of 1 (not at all engaged), 2 (somewhat engaged) to 3 (very engaged). Seniors are the most active age group, and 24% of communities reported that seniors are very engaged in planning for their needs (***engagement of seniors***). ***Engagement of children*** includes two age groups: families with children and youth. Only 12% of communities reported families with children are very engaged, and only 6% report youth are very engaged. The survey also asked about the role of ***political engagement of seniors*** (reported by 94%), and the ***political engagement of families with children*** (73%) in motivating local governments to plan for their needs.

Common Vision and Trust
Both collective impact and collaborative governance theory emphasize the importance of common vision and trust. These could lead to more joint use services. The survey measures the level of common vision, trust in schools, school quality, and whether raising local funds for facilities is easier if they are for all ages. The survey asked which institutions are most trusted sources of information about services by seniors and families with children. For families with children, 81% of responding communities reported schools are most trusted (***children trust schools***), while only 7% of respondents report schools were highly trusted by seniors (***seniors trust schools***). ***Raising funds*** measures whether it is easier to raise local funds (e.g. bonds, taxes) if facilities are for all ages. About half of responding communities reported it is easier to raise funds for multi-generational facilities (51%).

School quality and common vision are measured on a Likert scale of strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). Forty-three percent of the responding communities agreed that "public schools are of high quality in my community", and 29% of respondents strongly agreed with that statement. Regarding common vision, more than half of the respondents were neutral on whether "senior participation has led to a common vision (***common vision from seniors***," median value=3) or "participation of families with children has led to a common vision" (***common vision from children***, median value =3).

Barriers
The literature shows that liability, safety concerns, and community opposition are often barriers to joint use services (Spengler et al., 2007). Thirty-one percent of respondents reported that ***liability*** is a barrier to joint programming for different ages. Barriers related to safety concerns include ***regulations to protect children*** (reported by 13%), and ***regulations to protect frail elders*** (8%). ***Opposition*** includes two measures: opposition to joint programming from seniors toward children (7%), and opposition to joint programming from families with children toward seniors (3%).

Socioeconomic characteristics

To measure the effect of community characteristics on joint use services, we include local need, local capacity, racial heterogeneity, and metro status. Data are drawn from the American Community Survey 2015-2019 (U.S. Census Bureau, 2021). Local need is measured by the dependent population (percent of population under 18 and over 65), and the Gini index of income inequality. Local capacity is measured by per capita income. This is an indirect measure of local government capacity commonly used in local government studies, as taxes are drawn from income (Kelly & Lobao, 2021; Xu & Warner, 2022). We also control for the total population and racial heterogeneity. Racial heterogeneity is measured by the ratio of the non-Hispanic white senior population (over 65) to the minority child population (under 18). This ratio indicates if the municipality has more white seniors than minority children. We might expect more joint use services in communities with more dependent population, and fewer joint use services in communities with more racial heterogeneity between the old and the young.

We group communities into the metro core, suburb, and rural areas based on US Census delineations (U.S. Census Bureau, 2018). Metro core places have at least one principal city and suburbs are other places inside metropolitan areas. Rural are nonmetropolitan places. Metro core places are set as the reference. Descriptive statistics are shown in Appendix Table 1.

Methods

To reduce variables and address multicollinearity problems, we ran factor analysis to group the survey variables into factors. The 21 variables are grouped into 8 factors (Table 2), which reflect our theoretical concepts. The variables measuring collaboration between local governments and schools are mainly loaded into one factor, ***power with***. The ***power over*** factor captures the power of local governments over schools in terms of school siting and budget control over schools. The ***age-friendly planning*** factor includes if the comprehensive plan addresses the needs of seniors and families with children. The ***political engagement*** factor captures local governments' motivation of planning for all ages due to the political engagement of seniors and families with children. The ***common vision*** factor captures the engagement of seniors and children in planning for their needs and the common vision generated through participation in planning. The ***funding and trust*** factor is loaded by the residents' trust towards schools, and raising funds for facilities serving all ages. The ***opposition*** factor captures opposition to joint programming and this is associated with lower public school quality. Liability and regulations limiting joint use all load on the ***barriers*** factor.

Table 2 about here

Due to the discrete and skewed nature of the dependent variable, we ran negative binomial regression to examine factors which differentiate communities with more joint use services with schools. The equation is shown below.

Number of joint use services = f{power with, power over, common vision, age-friendly planning, funding and trust, political engagement, opposition, barriers, per capita income, Gini index, total population, percent of dependent population, racial heterogeneity, suburb, rural}.

Table 2 Factor analysis: Drivers of Joint Use with Schools

Variables	Power with	Power over	Age-friendly Planning	Political engagement	Common vision	Funding and trust	Opposition	Barriers
Power with schools								
Joint use agreement (2 elements)	**0.6072**	0.2435	0.0872	0.1115	0.0197	-0.0035	0.0721	0.0091
Partnership (1=yes)	**0.6311**	-0.2012	0.0965	0.1274	0.043	0.1043	0.0288	0.0481
Information (1=yes)	**0.7049**	0.105	0.0638	0.0167	-0.0036	0.0333	0.0003	0.043
Power over schools								
School siting (2 elements)	0.3829	**0.5513**	0.334	0.0637	0.0611	-0.0407	0.0906	0.0009
Budget control (1=yes)	-0.0136	**0.8636**	0.0492	0.0168	0.0137	-0.0222	0.0092	-0.0095
Planning and participation								
Planning for seniors (1=yes)	0.0456	0.0304	**0.9178**	0.0378	0.0696	0.0209	-0.0074	-0.003
Planning for children(1=yes)	0.0573	0.0751	**0.9173**	0.0203	0.053	0.0401	0	0.0169
Political engagement of seniors (1=yes)	0.0497	0.0086	0.0579	**0.9052**	0.0359	0.0119	0.0304	0.0655
Political engagement of children(1=yes)	0.0423	0.0237	0.008	**0.8957**	0.0758	0.0085	-0.0023	-0.0031
Engagement of seniors (scale 1-3)	0.3014	-0.177	0.3284	0.1985	**0.342**	-0.1833	0.1713	-0.0398
Engagement of children (2 elements, scale 1-3)	0.365	-0.0867	0.1713	0.0509	**0.4813**	-0.2085	0.197	-0.0335
Common Vision and Trust								
Common vision from seniors (scale 1-5)	-0.0305	0.0077	0.0697	0.0691	**0.8732**	0.0746	-0.0844	0.0343
Common vision from children (scale 1-5)	0.031	0.0414	0.0542	0.0468	**0.8594**	0.0607	-0.0286	0.0231
Seniors trust schools (1=yes)	0.1791	0.0492	-0.0201	-0.0047	0.2624	**0.5351**	0.3107	-0.0825
Children trust schools (1=yes)	0.3457	0.0733	0.0871	0.1272	-0.1171	**0.4983**	-0.1913	0.0988
Raising funds easier for intergenerational facilities (1=yes)	-0.114	-0.149	0.1217	-0.0063	0.1691	**0.6447**	-0.0937	-0.0359
Public school quality (scale 1-5)	0.3544	0.0458	0.0138	-0.0779	0.2473	-0.2488	**-0.5002**	0.0034
Barriers								
Opposition to joint services (2 elements)	0.1164	0.0616	0.0056	0.0225	-0.0806	-0.093	**0.7445**	0.0622
Liability (1=yes)	-0.0288	0.0452	-0.0381	-0.0126	0.1276	0.0368	0.29	**0.5532**
Regulations to protect frail elders (1=yes)	0.022	0.0055	0.0281	0.0138	0.0177	-0.0404	-0.009	**0.8741**
Regulations to protect children (1=yes)	0.0287	-0.0236	-0.0047	0.0576	-0.0031	0.0159	-0.0038	**0.8857**

Note: Bold numbers show elements that primarily load on that factor. Factor loading after varimax rotation.
Data source: Planning for All Ages Survey 2019. 996 US cities and counties

Results

Model results are shown in Table 3. The standardized coefficients allow us to compare the marginal effects between variables.

Table 3 Negative binomial model results: factors related to joint use services with schools

	Coeff.	Std. Coeff.	IRR	p value
Power with (factor score)[1]	0.25**	0.15**	1.29**	0.00
Power over (factor score)[1]	0.06*	0.04*	1.06*	0.01
Common vision (factor score)[1]	0.15**	0.09**	1.16**	0.00
Age-friendly planning (factor score)[1]	0.11**	0.07**	1.12**	0.00
Funding and trust (factor score)[1]	0.11**	0.06**	1.11**	0.00
Political engagement (factor score)[1]	0.07**	0.04**	1.07**	0.01
Opposition (factor score)[1]	0.02	0.01	1.02	0.46
Barriers (factor score)[1]	0.04	0.02	1.04	0.10
Per capita income (ln)[2]	-0.17	-0.03	0.84	0.05
Gini index (0-1)[2]	-0.95	-0.03	0.39	0.12
Total population (ln)[2]	0.09**	0.07**	1.09**	0.00
Percent of dependent population (%)	-0.00	-0.01	1.00	0.69
Ratio of white seniors to minority children[2]	0.40	0.02	1.49	0.38
Suburb (1=yes)[3]	-0.08	-0.02	0.93	0.35
Rural (1=yes)[3]	-0.03	-0.01	0.97	0.76
Constant	1.98*	-	-	0.05
Log likelihood		-1703.96		

Note: * p<0.05, * * p<0.01. N= 996 US cities and counties
Likelihood-ratio test of alpha=0: chibar2(01) = 19.10 Prob>=chibar2 = 0.000
Data sources: 1. Table 2, author analysis of Planning for all Ages Survey, 2019, 2. American Community Survey 2015-2019 (U.S. Census Bureau, 2021) , 3. US Census Delineation files 2018 (U.S. Census Bureau, 2018)

Results show that the ***power with*** variable has the largest effect on the number of joint use services (Std Coeff=0.15). Local governments' ***power over*** schools also has a positive effect on service delivery, but it has a much smaller effect (std Coeff=0.04). We find that opposition to joint programming and barriers are not related to joint use services with schools.

The second most important factor was common vision (Std Coeff=0.09). Civic participation leads to common vision, and is related to more joint use services with schools. The third most important factor was age-friendly planning. When communities give more attention to the needs of children and seniors in their comprehensive plans, joint use services are higher.

Trust leads to action. In communities where there is more trust between residents and schools, and where raising funds is easier because facilities are for all ages, we find more joint service delivery with schools. Political engagement of seniors and families with children is also important.

Larger communities have more joint use services, but other socioeconomic conditions do not differentiate the level joint use services. The number of services is not related to income, Gini, dependent population, racial heterogeneity or metro status. This is a surprise, as we

expected joint use services with schools might be greater in communities with more dependent population, or lower in communities with more heterogeneity across generations. Schools can be especially important institutions for community development in rural areas (Schafft, 2016), and our research shows rural municipalities report similar levels of joint use services as their suburban and metro counterparts.

Discussion

Our research contributes to theories of planning, collaborative governance and collective impact with specific attention to community-school collaboration. While much research on joint use services between communities and schools focuses on barriers related to liability and opposition, our analysis shows these are not significant in differentiating the level of joint use across communities. Our research shows that communities with more shared services with schools, are those with shared power, community engagement and common vision. These three elements are key.

Community development theory recognizes the importance of collaboration. But prior work on collaborative governance has not given enough attention to dimensions of power. Collective impact theory (Kania & Kramer, 2011; Walzer, Weaver, & McGuire, 2016; Reece & Gough, 2019) and cross sector collaboration research (Ansell & Gash, 2008; Warner & Zhang, 2021; Zhang et al., 2020) emphasize the importance of trust, planning, engagement and common vision. Similarly, Elinor Ostrom's framework (2010) for communities addressing collective action, emphasizes trust, norms and repeated interaction. Our model results show participation, common vision and community planning are found in communities with higher levels of joint use.

But power also matters. Joint use requires horizontal collaboration with schools. But as local anchor institutions, schools often do not share power with their local governments. Clopton and Finch (2011) have elaborated social anchor theory, as foundational for community development, but raise concerns about the type of power these social anchors hold in community networks. Planning theorists have called for more attention to differentiating *power with* and *power over* (Westin, 2022). Flora et al. (2016) have articulated the community capitals framework, giving special attention to forms of power found in social, political and financial capital. As communities build social capital – it must be horizontal, not just hierarchical, and this can be difficult to achieve with schools due to their power position within the community (Warner, 1999). Interestingly, our research finds that it is not hierarchical power over school budgets and site planning that matters. Few communities have this power over schools in any case. What matters is shared power with schools for collaborative action. Shared power involves the ability to debate and contest issues with partners. Contestation helps build community social capital (Flora & Flora, 1993; Warner & Weiss Daugherty, 2004). Collaborative governance and collective impact theory emphasize broad stakeholder engagement (Ansell and Gash, 2008; Kania & Kramer, 2011; Walzer, Weaver, & McGuire, 2016). This helps create shared power across the network.

What matters most is shared power – through partnerships and formal joint use agreements between communities and schools. These lay the foundation for collaboration. Our analysis shows that horizontal *power with* has more effect on joint use than hierarchical *power over*. This is an important insight for collaborative governance and community development theory and for work on school-community collaboration in particular.

This study has limitations. This survey was sent to local governments across the US. One limitation of the survey is that a single respondent is evaluating the common vision and trust between two institutions – schools and local government. Another limitation is the cross sectional nature of our data. Many theories of collaboration emphasize the importance of iteration, and building trust over time through small successes. Future research could collect data to measure joint use services over time and the factors driving a higher level of collaboration between community and schools.

Conclusion

Increasing attention is being given to the role of schools, as community-wide resources for joint service delivery to meet the needs of children, their families and seniors. This research offers the most recent national survey data on school-community collaboration to provide services for children and seniors. It unpacks the drivers of joint use with schools, giving explicit attention to horizontal and hierarchical dimensions of power. We find that horizontal power between communities and schools in information sharing, partnership and formal agreements has the greatest impact on the level of shared services. Engagement and common vision have the next largest impact and planning is the third. These results have important implications for practice, as they confirm that attention should be given to participation and building the organizational framework for collaboration, as argued by collaborative governance and collective impact theory.

What is much more difficult to address is hierarchical power. But our analysis suggests that hierarchical power over schools in terms of siting and budget authority is not as important. This is a valuable insight, as schools are generally independent of local government and few local governments have direct power over schools. Even though communities are often divided by race and age, these factors do not differentiate the level of joint use with schools.

These results suggest a way forward in addressing service deficits for children and seniors. Schools, as a community institution, can provide joint services. Local governments can promote more community services through schools by building partnerships based on shared power.

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Appendix Table 1: Descriptive statistics, Joint Use Services with Schools

Variable	Mean	Std. Dev.	Min	Max
Joint use services	1.93	1.70	0	7
Power with (factor score)[1]	0.00	1.00	-3.30	1.98
Power over (factor score)[1]	0.00	1.00	-1.68	3.28
Common vision (factor score)[1]	0.00	1.00	-3.11	2.98
Age-friendly planning (factor score)[1]	0.00	1.00	-1.78	1.83
Political engagement (factor score)[1]	0.00	1.00	-1.53	1.76
Funding and trust (factor score)[1]	0.00	1.00	-2.89	2.84
Opposition (factor score)[1]	0.00	1.00	-1.63	6.01
Barriers (factor score)[1]	0.00	1.00	-1.01	3.18
Per capita income (ln)[2]	10.36	0.34	9.44	11.93
Gini index (0-1)[2]	0.43	0.05	0.29	0.58
Total population (ln)[2]	9.97	1.42	6.05	15.01
Percent of dependent population (%)	39.73	5.11	12.15	62.17
Ratio of white seniors to minority children[2]	0.18	0.80	0.00	0.59
Metro core (1=yes)[3]	0.19	0.39	0	1
Suburb (1=yes)[3]	0.52	0.50	0	1
Rural (1=yes)[3]	0.29	0.45	0	1

N= 996 US cities and counties.
Data sources: 1. Table 2, author analysis of Planning for All Ages survey, 2019, 2. American Community Survey 2015-2019 (U.S. Census Bureau, 2021), 3. US Census Delineation files 2018 (U.S. Census Bureau, 2018)