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Research on Enhancing Digital Governance Capabilities in Urban Community Sports from a Collaborative Governance Perspective

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Abstract: *By combining the building of smart cities with the needs of city residents to be healthy, it paves the way for how local communities will use digital technology to enhance their sporting activities. This research will look at the core competencies of digital governance relating to local community sport through the collaborative framework. A comprehensive analysis framework was created that included the follow aspects: collaborative mechanisms, the functions of a platform, sharing of data, the degree of resident literacy, and ways to evaluate what has been done to improve local sporting services through digital governance. In addition, an integrated path for enhancement was created via the establishment of governance communities, constructing smart platforms, linking data, raising literacy levels among residents, and creating an evidence-based optimisation path for maximising the amount of public sports services and enhancing community living through maximizing the effectiveness of digital governance.*

Keywords: *Collaborative governance; Urban community sports; Digital governance; governance capacity*

1. Introduction

Urban community residents exhibit an increasing trend for convenience and personalized sports services; thus, relying purely upon an administrative governing structure no longer suffices to deal with today's many diverse, complex service scenarios. While digital technologies have been developed to assist with integrating and re-engineering of community sports resource processes, the application of these technologies has not resulted in an automatic enhancement of government capabilities. The idea of collaborative governance speaks to how organically active and complementary forces - such as governmental agencies, community-based organizations, market-based institutions, and residents themselves - must work together as one unified collective entity. Competitive advantage through the combined efforts of these forces is highly likely to be achieved through a collaborative governmental governance model. Consequently, collaborative governance offers researchers one viable option to better understand and solve current unmet needs, as well as how best to modernize governance capability when it comes to digitizing community sport assets and services through technology.

2. Theoretical Explanation of Digital Governance for Urban Community Sports under the Perspective of Collaborative Governance

2.1. Core Concept Definition: Collaborative Governance and Digital Governance Capability for Community Sports

Collaborative governance can be defined as the systematic integration of multiple stakeholders (including government, non-profit organizations, for-profit organisations, and residents) toward the attainment of a common objective through collaborative efforts. One aspect of collaborative government is the capability to make use of data, platforms, and intelligent technologies within a digital environment to enhance community sports services, plan community-based events, and address the needs of residents. This capability is not simply one facet of technology, but rather encompasses the collaborative management of the entire process of reserving facilities, organising recreational activities, and evaluating the feedback provided by members of the community. The success of this capability will depend upon how well digital resources can serve as a bridge connecting all stakeholders and increasing the effectiveness with which services are delivered.

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2.2. Theoretical Foundation: Coupling of Collaborative Governance Theory and Digital Governance Theory

Collaborative governance theory is an approach to the nature and extent of citizen participation in community sport, while digital governance theory provides methods for managing large amounts of data and improving processes. The intersection of these two theories is that digital technologies will provide a basis of reliable information and a platform for continuing communication and joint action between the diverse sectors involved in community sport. An example of this is shared data about the use of municipal sport facilities. This shared data can enable all participants in the sport sector to create better comprehensive planning or open facility use plans together. If these two theories do not have an integrated approach at the theoretical level, then the digital transformation of community sport can be based primarily on a technology-focused approach. As a result, digital tools used for managing community sport may remain as tools for the isolated management of one department and will therefore lack the ability to facilitate future joint decision-making and joint delivery of services across multiple departments [1].

2.3. Analytical Framework: The Logical Mechanism of Collaborative Governance Embedded in Digital Practices

The logical mechanism of embedding collaborative governance into digital practices is reflected in the fact that digital technology provides stable and transparent communication channels and collaboration spaces for diverse entities. For example, the community sports facility annotation function based on shared maps can enable residents, community managers, and sports departments to simultaneously grasp the distribution and usage of resources. This transparency promotes dialogue among all parties based on facts, shifting the collaborative process from relying on individual relationships to relying on jointly recognized data and rules. Digital tools can solidify collaborative processes, transforming the division of labor plans reached through offline negotiations into traceable and evaluative task flows online, ensuring that consensus can be transformed into concrete joint actions. Without this embedded mechanism, collaborative governance can easily remain at the level of temporary meetings and document exchange, making it difficult to form a stable and predictable cooperation model.

3. Realistic Examination and Challenge Analysis of Digital Governance Capability for Urban Community Sports

3.1. Inefficient Mechanisms for Multi-stakeholder Collaborative Participation

Digital governance in the context of community sports has large barriers to effective implementation. The introduction of digital platforms under the direction of government agencies does not, in many instances, provide sufficient data management and access rights to community-based not-for-profit organisations and commercial sport entities, therefore creating a more passive and subordinate role for the community and commercial sport participants in relation to scheduling activities and allocating resources. Community and commercial sport entities therefore do not have the appropriate channels or incentives to participate effectively in the governance process, thereby limiting their ability to optimally integrate and allocate their social resources (e.g. venue and coaching) through digital technologies. Community-based participants (i.e. most residents) are primarily restricted to basic operational functions of digital platforms (e.g. venue booking and informational access), while not having an institutionalised feedback or obtaining a responsive and interactive way of enhancing service delivery functions through their input into digital technologies.

3.2. Inadequate Alignment Between Digital Platform Functions and Community Sports Needs

Community residents' inability to get support for the broad spectrum of sports activities they want to participate in is largely due to existing platform designs and their development logic being based on traditional government or commercial software. Existing platforms do not adequately accommodate the broader range of sports-related needs expected by community residents, nor do they provide solutions for many of the key components of residents' sports-life experiences, which include spontaneous participation in sporting events; organizing neighbourhood sports communities; and providing individualized fitness guidance based on the unique needs, interests, and preferences of community

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members. Additionally, current platforms do not provide residents with an effective digital interface for recruiting and finding teammates; organizing drop-in games; and teaching residents to contact sports professionals for targeted coaching tips. Consequently, residents' usage of current platforms to support their participation in community sports is dwindling, which has resulted in an increasing disconnect between the service hub concept of platforms and community residents' actual sports-lives [2].

3.3. Barriers in Data Sharing and Operational Collaboration

Community sports management is affected by discrepancies in how each department or organization is assigned responsibilities and the lack of uniform standards for recording data. Barriers to sharing data and collaboratively conducting business continue to exist. Regional sport governing bodies possess data about the location of facilities while municipalities' street offices primarily record basic resident data. Facility/venue managers or sport clubs are typically aware of who uses their facility and what use is made of that facility as part of the community. The sources that exist are distinct in nature and therefore, require either a common interface or common data sharing bandwidth to be integrated successfully. Collaboration between departments is often impeded by the need to collect data separately from multiple departments to gather the same data for the purpose of planning fitness centres that are designed for the different age structures and user preferences of the community (ie., the collection of duplicate data and the existence of inconsistent information). Data that cannot be exchanged efficiently; and thus cannot be used to support collaborative decisions or to provide complementary services through the use of that data, results in the inability to provide longitudinal views of the community's data, or to establish easily used means for seeking community members' participation in the activities of sports groups.

3.4. Residents' Digital Literacy and Engagement Requiring Enhancement

Some community residents, especially the elderly, face operational difficulties when using smart devices and application software to access sports services. Many digital platforms have complex interfaces and deep functional levels, lacking clear guidance and simplified models that are suitable for elderly users. Although middle-aged residents have basic operational abilities, they may lack the motivation to continue using the platform due to its functions not matching their actual sports activity organization. Young people are familiar with digital tools, but they are more inclined to use familiar social software to meet their sports social needs. A unified digital platform has failed to effectively attract active participation from residents of different age groups, and its feedback channels are often not intuitive and convenient enough. This makes it difficult to systematically collect and analyze residents' real needs and experiences, and governance improvements based on digital platforms may deviate from residents' actual expectations.

3.5. Absence of Evaluation and Feedback Mechanisms for Digital Governance

The current process of digital governance in community sports generally lacks a systematic evaluation system and a smooth feedback loop. The operation and management of most platforms focus on functional implementation and transaction processing, and there are no clear normalized evaluation indicators and measurement methods for key dimensions such as service efficiency, resident satisfaction, and cross departmental collaboration effects. Residents often encounter problems or improvement suggestions during use, which can only be conveyed through scattered customer service channels or occasional research activities. These fragmented opinions are difficult to systematically collect, classify, and transform into specific optimization needs. As a result, the governing body may not be able to accurately grasp the actual effectiveness and weak links of digital measures, and resource investment and platform iteration upgrades may lack precise data support and clear improvement directions [3].

4. Pathways to Enhancing Urban Community Sports Digital Governance Capabilities in a Collaborative Governance Framework

4.1. Establishing a Multi-Stakeholder Collaborative Governance Community

At the operational level, the institutionalized platforms established by the government should feature clear role and permission management functions, assigning differentiated data entry, review,

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approval, and operational permissions to various entities. For instance, community organizations can access exclusive administrative backends for managing local activity information, sports enterprises gain independent maintenance modules for their courses and venue resources, while resident representatives are granted the authority to initiate topics and participate in deliberation meetings. The platform must embed standardized collaborative workflow templates, such as joint activity approvals and resource coordination applications, guiding all parties to collaborate orderly within established rules. To sustain the long-term vitality of the community, it is essential to implement flexible incentive mechanisms like contribution points and credit evaluations, converting active contributions in areas such as information sharing, event organization, and conflict mediation into visible assessment records. Government regulatory bodies should play a pivotal role in agenda guidance and conflict mediation during joint meetings, leveraging the platform's aggregated data and public opinion insights to support decision-making, ensuring that communication and negotiation lead to constructive problem-solving, thereby consolidating collaborative relationships through dynamic adjustments.

4.2. Developing Demand-Driven Smart Community Sports Service Platforms

On the basis of the existing community work system, platform function iterations should prioritize addressing the most frequently reported resident concerns, such as information asymmetry and cumbersome appointment processes. For instance, direct data integration with the public sports venue management systems in the jurisdiction could be prioritized to ensure accurate availability information and real-time booking capabilities. In implementation, the sub-district office could lead coordination efforts to establish simple API-level connections between the sports department's venue backend systems and the community platform, enabling seamless data flow from inquiry, reservation to check-out. For community feature development, initial phases could include designing simplified event initiation templates with community staff assisting residents, followed by gradual optimization as usage habits take hold. To address practical barriers in integrating school and commercial institution data, a phased rollout strategy could be adopted, initially connecting with willing partners by demonstrating the service convenience and potential customer flow benefits for residents. For example, pilot programs with one or two schools could open sports field data during fixed weekend hours, with dedicated booking channels on the platform. Feedback handling requires establishing a mechanism combining online work order systems with offline regular meetings, ensuring resident suggestions submitted via the platform are automatically assigned by type to corresponding community grid workers or functional departments for follow-up. Response deadlines must be strictly observed, with the handling process and outcomes publicly displayed on the platform's relevant pages. This pragmatic approach focuses on leveraging existing administrative and service resources, achieving gradual alignment between platform functions and residents' actual usage scenarios through continuous small-step improvements [4].

4.3. Building Robust Data Integration, Sharing, and Operational Coordination Mechanisms

The establishment of data integration, sharing, and business coordination mechanisms requires starting with unified standards and clear rules. Relevant government departments should take the lead in collaborating with community organizations and sports service agencies to jointly develop a foundational data catalog and exchange specifications for community sports. These specifications should clearly define the formats, definitions, and update cycles for key information such as facilities, personnel, activities, and resident needs. In practical operations, a regular data coordination team must be established to periodically verify and maintain the accuracy and consistency of data across departments. Based on unified standards, all parties can rely on regional data-sharing platforms or government cloud resources to share anonymized data resources within their jurisdiction or control under a tiered authorization mechanism, provided data security and personal privacy are safeguarded. This mechanism should detail the application, approval, and recording processes for data access, ensuring each data exchange is traceable and its purpose is clearly defined. Business coordination requires institutionalizing cross-departmental and cross-level collaborative processes. For instance, for large-scale community sports events, an online joint review process can be designed to enable synchronized handling of approvals and preparatory tasks by departments such as public security, health, and sports, along with local communities, within their respective jurisdictions. In daily operations, the platform should support the automatic circulation of task work orders among relevant entities, status reminders, and progress tracking, with clearly defined response and completion deadlines. For residents' complex needs involving venue maintenance or event coordination, the system can automatically assign and coordinate follow-ups with relevant parties based on preset rules, ensuring

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systematic and closed-loop problem resolution rather than stagnation at a single stage.

4.4. Implementing Community Sports Digital Literacy Popularization and Empowerment Initiatives

The implementation of community sports digital literacy popularization and empowerment action requires community managers to collaborate with professional organizations and volunteer forces to design hierarchical guidance plans based on the characteristics and obstacles of different resident groups. For elderly residents who have difficulty operating, regular face-to-face workshops on smartphone usage can be held at community activity centers, and a paper or video version of the operation guide with large screenshots and voice explanations can be produced. Community workers and young volunteers should provide on-site or on-site "one-on-one" tutoring services to assist them in completing the complete process from downloading applications to booking venues. For a wider range of community residents, empowerment actions need to focus on guiding them to understand and make good use of the community functions and feedback channels provided by digital platforms, such as demonstrating on-site how to create online activities, recruit members, or provide service suggestions during community sports events. The backbone members of community neighborhood committees and sports clubs should receive specialized training, so that they can not only proficiently use platform management functions, but also become a "digital bridge" connecting platform services with residents' needs, actively promoting and assisting in solving usage problems in daily work. These ongoing support measures aim to transform the use of digital tools into a natural habit for residents to participate in community sports activities.

4.5. Refining Evidence-Based Decision-Making Monitoring, Evaluation, and Dynamic Optimization Systems

Establishing an effective monitoring, evaluation, and dynamic optimization system first requires designing a quantifiable and collectable key performance indicator system around the core objectives of digital governance in community sports. This system should cover multiple dimensions such as platform activity level, service supply efficiency, resident satisfaction, and cross subject collaboration effectiveness, such as tracking facility reservation success rate, number of participants in activities, average resident evaluation score, and cross departmental task completion time. The governance platform needs to have built-in functions for automatic data collection and visualization panels, allowing all parties involved to view real-time updates on core indicators related to their responsibilities. The regular special evaluation work needs to combine quantitative data and qualitative analysis, explore the causes behind the data and the true feelings of residents through in-depth interviews, case analysis, and other methods [5]. The prominent issues identified during the evaluation, such as low usage of specific functions or concentrated complaints of a certain type, should trigger the preset optimization response process. This process requires the relevant responsible parties to analyze the reasons and propose improvement plans within a deadline, and after collaborative discussion, include them in the platform iteration or service adjustment plan. Resource allocation and policy tools should also be dynamically adjusted based on evaluation results, directing more support towards areas with significant results or areas that urgently need to be strengthened, thus forming a continuous cycle of "monitoring evaluation feedback optimization".

5. Practical Outlook and Sustainable Advancement Mechanism

The continuous promotion of digital governance in community sports first relies on transforming effective collaborative experience into stable institutional arrangements. Community managers need to take the lead in organizing all parties to clarify well functioning collaboration rules, data integration standards, and service processes in the form of the "Community Sports Digital Governance Collaboration Charter" or binding multi-party agreements. This document should specify the data provision responsibilities of all parties, joint discussion cycles, task assignments, and response deadlines. In terms of resource security, the expenses for platform basic operation and maintenance, key data interface maintenance, and routine digital skills training should be included in the annual public service budget of street offices or communities. For enhancing sexual functions, such as developing a youth sports interest matching module, cooperation with local sports technology enterprises can be explored to introduce their professional capabilities and construction funds through government purchasing services or franchising models.

The sustainability of the model requires the establishment of effective mechanisms for knowledge

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diffusion and capability updating. The street authorities should conduct regular evaluations and document the governance practices of pilot communities within their jurisdiction, forming a case library and toolkit covering implementation steps, common problems, and solutions for other communities to learn from. The higher-level sports administrative department can establish a performance oriented special subsidy fund allocation mechanism based on key indicators such as platform activity, resident satisfaction, and cross departmental collaboration efficiency, and reward communities with outstanding governance achievements. At the same time, it is necessary to organize regular cross community communication, seminars, and skill update training for community workers and activists, helping them learn to cope with new fitness needs, manage online community conflicts, and other new challenges, in order to maintain the adaptability and innovative vitality of the entire governance network [6].

6. Conclusion

Technology continues to advance in community sport in urban areas. Cities will continue to evolve their digital governance capability through system engineering processes to create a value rationality framework that integrates existing technologies for collaborative governance. Future developments will take the next step beyond simplistic views of simply using technology as an overlay; instead, they will foster the development of mutual goals and visions among diverse stakeholders and create avenues for discussion, collaboration and interdependence between stakeholder groups to build stable alliances. At the same time, as technological advances are adopted on a larger scale by communities, they provide an opportunity for residents to gain a greater sense of belonging and connection to their community and to develop a sense of well-being through their participation in community sports.

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References

[1] Ma Dehao, Xu Shengxi. Basic Connotation, Practical Dilemmas and Optimization Countermeasures of the "Five-Community Linkage" Governance Model for Community Public Sports Services[J]. Journal of Tianjin University of Sport, 2025,40(02):156-162.

[2] Song Yang, Chen Kuan, Chen Chen, et al. Governance Dilemmas and Development Paths of Aging Society from the Perspective of Collaborative Governance[J]. China National Conditions and Strength, 2022(04):4-9.

[3] Wang Fang, Zhang Chonglong, Zhang Mingxi, et al. Research on the Empowerment Mechanism and Path of Multi-stakeholder Participation in Urban Community Sports Governance in China[J]. Journal of Beijing Sport University, 2024,47(11):14-25.

[4] Zheng Yamo, Cao Li, Wang Mei, et al. Research on the Construction and Practice of a Multi-stakeholder Collaborative Urban Community Sports Governance System [J]. Journal of Shandong Institute of Physical Education, 2023, 39(2):63-74.

[5] Ma Dehao. Building a Community Sports Governance Community and Consolidating the Foundation of Mass Sports Governance[J]. Sports Research, 2025,39(01):119.

[6] Liu Dian, Li Linwei. Research on Multi-stakeholder Collaborative Governance of Urban Community Sports in China [J]. Liaoning Sports Science and Technology, 2023, 45(5):42-47.