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An Exploration of Child-Friendly Block Renewal based on the Experience of London Borough of Hackney

-- A Case Study of Xiaoxihu Block in Nanjing

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Abstract: With the continuous progress of the society, children's needs for urban space have received continuous attention from all walks of life. The construction of child-friendly cities has become an important index to measure the level of civilization and development of cities. The development of child-friendly cities has become one of the strategies to solve the unbalanced and inadequate social development. At present, there are many inconveniences for children in China's urban space, and it is still necessary to improve the construction of blocks suitable for children's activities. Driven by the child-friendly concept, it is necessary to actively build city block space with priority, safety and fun for children to actively participate in Xiaoxihu block in Nanjing, China needs to be further improved in child-friendly construction. Through learning from the construction experience of London borough of Hackney in London, the paper summarized relevant policies and space construction methods in child-friendly aspects, and provided corresponding suggestions for the renovation of Xiaoxihu block, hoping to provide reference for more city spaces in our country.

Keywords: Child-friendly Block; City Renewal; Child-friendly City; Xiaoxihu Block.

1. Introduction

For a long time, people have not been aware of the adverse consequences of the city environment centered on the needs of adults on the physical and mental health of children [1]. According to UNICEF's (United Nations International Children's Emergency Fund) 2012 State of the World's Children Report: Children in an Urbanizing World, more than hundreds of millions of children around the world lack access to basic public services in cities [2]. Therefore, city construction should pay attention to the urgent needs of children for the city environment. In recent years, China has begun to vigorously promote the construction and development of child-friendly cities. In 2021, China promulgated the "Meaning of Promoting the Construction of Child-friendly Cities", which pointed out that in the future city construction process, designers should pay attention to the needs of teenagers and children, and from the perspective of children, efforts should be made to create more city environments conducive to the growth of children. Building city spaces that make children's activities more convenient. At the same time, China's "double reduction" policy has further issued the whole society's continuous attention to the construction of child-friendly cities. Building children's friendly blocks can not only facilitate children's activities in the city, meet the basic interaction and communication behaviours of children in the city space, but also enhance the connection between children and the outdoor environment, improve the social cognition of young children, maintain a positive and healthy psychological state, and gradually cultivate children's awareness of respecting nature and consciously maintaining the city environments.

2. Research Background

The research on child-friendly urban space construction is earlier in foreign countries. The United Nations attitude on child friendliness and child rights has made most Western countries realize the impact of urban construction on children's physical and psychological well-being, as well as the importance of developing urban construction from a child-friendly perspective. The establishment of the Bi-National Child-Friendly City Initiative (CFCI) by UNICEF in 1996 fully reflects the importance of countries to the construction of child-friendly cities and plays an important role in the construction of child-friendly urban space. Existing theoretical studies have comprehensively demonstrated the three dimensions of the concept of child-friendly cities: Rights, physical environment and governance [3], and can combine theoretical research with planning and design to carry out multidimensional effective exploration [4]. For example, the "walking bus" implemented in the United Kingdom ensures the safety of children's travel by escorting them all the way [5]. Children's Town in Helsinki Museum, Finland, holds exhibitions for young children to learn about the history of Helsinki through field experience and encourage children to acquire knowledge in the activities [6]. Delft, the Netherlands, has built a dual children's travel path for children with traffic safety and fun games, providing children with more opportunities for outdoor activities on the premise of ensuring safety [7].

Compared with foreign countries, domestic research and practice on the construction of child-friendly cities are relatively late. In 2021, China had officially adopted the construction of child friendly cities as its development plan. Besides, Scholars are gradually conducting research on child friendly construction. At present, cities such as Shanghai, Nanjing, Beijing, Shenzhen and Guangzhou have taken corresponding measures to accelerate the construction and development of child-friendly city space [8]. Besides, the academic community has conducted many relevant studies on the theoretical connotation and significance of child-friendly

block space [9], and conducted in-depth studies in combination with old block renewal [10], block safety [11], landscape design strategy [12], and children's psychological behaviors [13]. Currently, these articles cover different fields such as architecture, sociology, statistics, economics, and have initially formed a multi-disciplinary and multi-angle research system for the construction of children's friendly street spaces. However, most theoretical studies choose to propose feasible improvement strategies based on China's specific problems, with little reference or reference to foreign related research.

3. Overview and Status Quo of Xiaoxihu Block in Nanjing

3.1. Overview of Xiaoxihu Block

Nanjing Xiaoxihu block is located in Qinhuai District, Nanjing City, Jiangsu Province, China, with Madao Street to the south and Xiaoyoufang Lane to the north. In 2015, Xiaoxihu block began its renovation. The renovation plan explored a new idea of old city renewal under the premise of respecting residents' wishes, and proposed the renovation concept of "small scale, gradual and micro renewal", striving to retain part of the life atmosphere in the south of Nanjing Old City, in order to further create urban neighborhoods closely connected to the indigenous people. At present, Nanjing is also making continuous efforts to develop Xiaoxihu block into a child-friendly block, and hopes that more people can participate in the construction of child-friendly community and jointly promote children's participation.



Figure 1. Location analysis of Xiaoxihu block
Picture source: https://www.sohu.com/a/442570409_100246286

3.2. Child Friendly Issues in Xiaoxihu Block, Nanjing

3.2.1. Environmental Condition

The inner space of Xiaoxihu block is mostly linear and narrow. The overall ecological environment of the block is good. However, the plant species inside the block are few, and the color of the plant collocation is relatively monotonous, so the construction of the plant landscape still needs to be improved. Landscape sketches are not rich enough. Currently, there is no high-quality ecological environment foundation for children.



Figure 2. Environmental status of Xiaoxihu block
Picture Source: Photo taken by the author

3.2.2. Traffic Safety Situation

The safety of the motorway outside the school in Xiaoxihu block is weak, and it cannot guarantee a safe traffic environment for students. The phenomenon of motor vehicles, bicycles and pedestrians competing for street space each other often occurs, in which one side of the motor vehicle lane is often occupied by private cars. Although there are walking paths on both sides of the lane, the continuity of the route is poor, and there is a lack of sign system on both sides. Every day during the school and school period, the traffic outside the school gate will be interfered by students' parents to a certain extent, and it is relatively congested. Seriously affect the pedestrian traffic in the block.



Figure 3. Street traffic situation in small West Lake block
Picture Source: Photo taken by the author

3.2.3. Construction of Children's Activity Places

At present, Xiaoxihu block is constantly being built to become a child-friendly neighbourhood, however, the feedback and effect obtained are not satisfactory. Although there are several outdoor Spaces and buildings mainly for

children in the Xiaoxihu block, the number of children's activity facilities is not enough to provide children with activities and play opportunities. In addition, the design of some landscape pieces is unreasonable, and some space in the block is not fully utilized, which means that the site is not interesting and not attractive enough for children.



Unreasonable several landscape sketches





Several spaces in the block have not been fully utilized

Figure 4. Present situation of building children's activity places in Xiaoxihu block

Picture Source: Photo taken by the author

4. Construction of Child Friendly Blocks in London Borough of Hackney, London

4.1. Overview of the London Borough of Hackney

Hackney is one of the densely populated boroughs of the inner city of East London and is a diverse, creative and dynamic area. Through years of development, Hackney has become one of the most cosmopolitan areas in London. At one time, Hackney was also relatively backward in the construction of children's activity space and infrastructure, and the basic rights of children in the city were not paid enough attention. Through continuous development and exploration, The Hackney government and construction personnel have accumulated a lot of experience in the construction of child-friendly blocks, and continuously improve and optimize them on this basis.

4.2. Policies Related to Building Child-Friendly Blocks



The project called Making London a Child-Friendly City



Eight child-friendly principles for Hackney

Figure 5. Policies on building child-friendly blocks

Picture source:
https://www.london.gov.uk/sites/default/files/ggbd_making_london_child-friendly.pdf
https://s3-eu-west-2.amazonaws.com/commonplace-customer-assets/growingupinhackney/HDS12494%20Growing%20up%20in%20Hackney%20REPORT%20v13%20Principles.pdf

The UK's Make London a Child-Friendly City programme has played an important role in building child-friendly blocks in Hackney, guaranteeing children's rights to urban space in London in many areas. The plan states that the development of child-friendly cities must create safe and accessible environments for young children and increase children's opportunities for outdoor activities. At present, London is

constantly planning from the four perspectives of policy, design, management and participation, in order to promote children's autonomous and social activity, and ensure children's safety while providing them with a high-quality activity environment. The plan argues that cities have an obligation to engage young children in exploring urban Spaces, and therefore need to pay attention to the way children use space. At the same time, the London Borough of Hackney, based on its own regional characteristics, has put forward eight child-friendly principles to the public from the perspective of children. Each principle was discussed and approved by the workshop held by the Hackney Youth Council. These principles focus on the needs of young people so that young people can have more opportunities to participate in and adapt to the development and change of the community. At the same time, in order to attract children to have more frequent exposure to the natural environment, Hackney's block spaces provide various safe outdoor activities opportunities for different types of urban open spaces, encouraging children to explore the world.

4.3. Building Child-friendly Community Spaces

Hackney puts the interests, needs and activities of young children at the heart of its programme. Under the provisions of these relevant policies and plans, the overall urban space planning and design of Hackney must follow the innovative design guidelines formulated by Hackney Council, including urban public space, street space and residential surrounding space.

4.3.1. Urban Public Space



Figure 6. Ecological construction of the Gaeldston Garden in Hackney
Picture source: https://www.emileve.co.uk/projects/parklet/

In London, unused areas around roads are fully taken into account in the process of block construction, and these Spaces are designed into miniature parklets as far as possible to form public Spaces that can provide people with interaction, rest, children's play, greening, bicycle parking and other uses. This intervention cleverly transforms underused block spaces into usable public spaces to enhance the social cohesion of the block. Parklets, in part well-designed, can provide a safe place for young children to play and interact together. For example, Geldston Gardens in Hackney, parklet that creates a new type of garden space for the block that integrates microecosystems, community resources and learning environments. Besides, this parklet provides a stepped green landscape and rolling vegetation terrain, where children can learn about the process of growing plants in the garden, sow seeds and pick vegetables, and explore the knowledge about insects in the garden. It is obvious that the parklet not only improves the ecological environment quality of the block, but also provides children with high-quality activity space and opportunities to get close to nature.

4.3.2. Street Space

Hackney has taken into account the needs of children in the use and planning of street space. Based on the construction of the London play street project, the borough has provided many play streets for local children, and its setting based on the street space provides more opportunities for local teenagers and children to carry out fun activities from the city space. At the same time, London's school street construction plan has been well applied and implemented in Hackney. The program focuses on roads outside schools, making it easier and safer for students to walk and bike to school, while ensuring normal passage for nearby residents and pedestrians, reducing congestion at school gates and improving air quality in the block. The construction of school streets has led to a significant increase in the number of pupils walking and cycling to school in Hackney. The number of vehicles in the vicinity of the school has been significantly reduced during school and school days. In recent years, Hackney Games Association has combined school streets and game streets effectively and achieved remarkable results. For example, in the Gayhurst section of Gayhurst Primary School, there will be temporary road closures outside the gate of the primary school during school and school hours on weekdays, and volunteers and managers will be responsible for managing the closures. There are also regular outdoor games and small fun activities on Gatester Road, such as holding a school flea market or food bazaar. While participating in the activities, students' social skills are also improved and exercised.



Figure 7. School streets at Gayhurst Elementary School
Picture source: https://consultation.hackney.gov.uk/streetscene/gayhurst-road-and-london-fields-west-side-gayhurst/results/19059615-da_gayhurst-school-streets_signed.pdf



Figure 8. Fun activities on Gayhurst Road
Picture source:
https://www.gayhurst.hackney.sch.uk/news/?pid=66&nid=2&storyid=95

4.3.3. Residential Area



Figure 9. Kings Crescent Manor residential area children activity space construction
Picture source: https://www.thedeveloper.live/places/places/kings-crescent-estate-theres-a-feeling-of-life-coming-back

The residential area is one of the city block spaces that children are most familiar with and have the most frequent activities. Considering the convenience of children's outdoor activities, Hackney attaches great importance to the needs of nearby children for play and interaction when designing the residential area environment. For example, the King's Crescent residential estate in Hackney provides a number of outdoor Spaces for children to play in the block, with a recreational street running through the site at its core. The design is centered on the local children in both form and use, challenging the traditional view that the street can only be used as a passing space. The street offers many types of children's activity facilities, some of which can be combined with natural elements such as logs, rocks and water, where children can enjoy outdoor activities together. At the same time, the street is complemented by a series of public courtyards, which provide the conditions for flower and vegetable planting, aesthetically pleasing while forming a better ecological environment within the block, and providing more opportunities for children to play and social interaction.

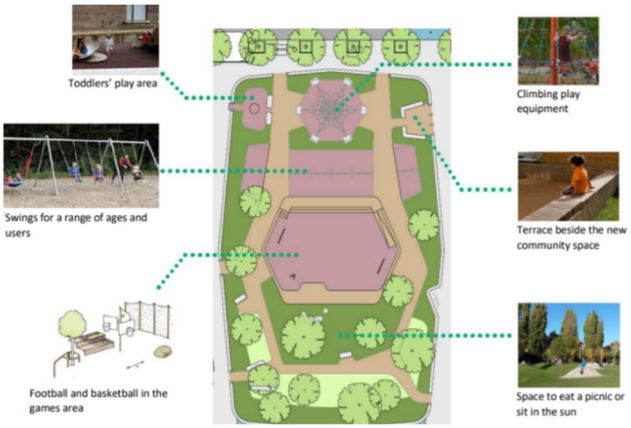


Figure 10. Kings Crescent Manor residential area part of the children's activity space design
Picture source:
https://www.contextualsafeguarding.org.uk/media/ywlhvcgo/sports-cages-mugas-places-of-safety-places-of-harm-places-of-potential-final.pdf

5. Inspiration from the Construction Experience of Child-Friendly Blocks in Hackney for the Renovation of Xiaoxihu Block in Nanjing

Nowadays, the relevant builders are making many efforts to turn Xiaoxihu into a child-friendly block, but there are still some problems, such as insufficient ecological environment construction, low traffic safety, insufficient utilization of some space and unsatisfactory overall fun creation of the block, which need to be further improved and updated. Based on the experience of Hackney borough in London, some suggestions are put forward to make it a more child-friendly city block.

5.1. Develop Better Construction Policies and Plans

The experience of building child-friendly city blocks in London's Hackney borough shows that the formulation of child-friendly policies and plans is a strong guarantee for the construction of child-friendly cities, which can effectively safeguard the urban space rights of young children and ensure that children can have a variety of activities in urban space. As one of the signatories of the Convention on the Rights of the Child, China should introduce targeted child-friendly policies to safeguard children's rights. However, at this stage, there are few standards for the design and facility setting of urban children's activity space, and there are no clear regulations on the scale of different types of children's activity space and the detailed design principles. Therefore, based on the current urban planning system of Nanjing, Nanjing Xiaoxihu block needs to formulate a design plan and meaning

more suitable for Xiaoxihu block, so as to give strong support to the further construction of Nanjing Xiaoxihu block as a child-friendly city block. Is expected to make a significant difference. In addition, Nanjing can also establish relevant management departments for the Xiaoxihu block, continuously promoting the process of a child friendly city, and providing guarantees for the smooth implementation of this policy.

5.2. Strengthen the Child-Friendly Space Within the Block to Create

5.2.1. Create a More Pleasant Ecological Environment in the Block

Building a better ecological environment based on the current situation of Xiaoxihu block can provide teenagers with a higher quality of play and social environment, and at the same time is beneficial to the physical and mental health of teenagers and children. It can focus on improving the plant landscape design inside the block, and try to choose a variety of flower, leaf and fruit plants when matching the plant landscape. At the same time, landscape designers can design interesting floral patterns, which is beneficial to the improvement of the ecological environment, and can attract children to recognize the environment and interact closely with nature. In the relatively narrow space, the constructors of Xiaoxihu block can learn from the micro-garden space in Hackney borough, which plays a certain role in science popularization and education while improving the ecological environment.



Figure 11. Ecological environment transformation intention drawings
Picture source: Author drawing

5.2.2. Creating a Safer Traffic Environment

The builders of Xiaoxihu block in Nanjing need to pay attention to the safety of middle school students in the area, avoid the potential safety hazards brought by motor vehicles to teenagers, strengthen the control of motor vehicle lanes, limit the speed of motor vehicles near schools and within the block, and recommend a maximum speed of 15 km/h, or even follow the practice of school streets in Hackney. The road is closed briefly during school and school hours. Motor vehicle lanes should pay attention to the setting of motor vehicle speed belts and zebra crossings, and add eye-catching signs to achieve the reminder effect. Limit the driving time and speed of motor vehicles within the block to improve the traffic safety within the block. Consider setting up fixed bicycle parking areas to form an orderly cycling order. When necessary, different materials, patterns and colors of paving can be used to form a clear difference between walking and cycling roads, creating a convenient and continuous cycling and pedestrian network.



Figure 12. Traffic signs on school streets in Hackney, London
Picture source: https://crossriverpartnership.org/healthy-streets-everyday/initiative/gayhurst-community-school-school-street/

5.2.3. Creating Interesting Spaces for Children's Activities

In order to attract children to engage in frequent activities in the block, it is necessary to strengthen the construction of children's activity facilities in the Xiaoxihu block, and rich and diverse activity facilities should be provided for children on the premise of not affecting normal traffic. At the same time, designers should be paid to the fun and interaction of the facilities themselves, such as sand pools and small fountains. What' more, small fun activities can be held in the block, such as plant identification contests, toy bazaars, painting contests, etc. These interesting activities can help children enhance their hands-on and communication skills, while also strengthening their connection and interaction with the block environment.



Figure 13. Fun children's activity spaces
Picture source:
https://www.london.gov.uk/sites/default/files/osd31_shaping_neighbourhoods_play_and_informal_recreation_spg_high_res_7_0.pdf

6. Conclusion

Children and adolescents have the right to have outdoor play and interaction Spaces in city blocks. At present, China's urbanization construction is in a relatively stable state, and the construction of child-friendly cities provides a new opportunity for high-quality city developments, which

requires China to make long-term and systematic planning to realize this vision. Through the analysis of Xiaoxihu block in Nanjing, it can be concluded that there are still some common problems in the construction of city blocks from the child-friendly perspective in China, so it is necessary for designers to learn from the relevant experience of London Borough of Hackney in London, England, to renovate urban blocks, create a safer and more comfortable urban block environment for children, and accelerate the process of building a child friendly city in China.

References

[1] Rodela Romina, Norss Emma. (2023) Opening up spatial planning to the participation of children and children Youth: The Swedish experience. European Planning Studies (2).

[2] Han Xueyuan, Chen Keshi. (2016) A study of child-friendly cities: A case study of Pearl District in Portland, USA. Urban Development Research (09), 26-33.

[3] Cordero Vinueza Viviana A., Niekerk F. (Femke), van Dijk T. (Terry). (2023) Making child-friendly cities: A socio-spatial literature review. Cities.

[4] Tim Gill. (2021) Urban Playground: How Child-Friendly Planning and Design can save cities. RIBA Publishing.

[5] Hayes Alexander, Wang Judith Y.T. & Nikitas Alexandros. (2022) Spatial multicriteria decision analysis for Walking School Bus target development strategies. Journal of Transport and Health.

[6] Tang Lingling, Shao Xiaopei. (2020) Characteristics and implications of "child-friendly" community construction in Finland. Early Education (Education and Teaching) (04), 21-23.

[7] Liang Shuangjing, Yuan Di. (2021) Delft City Block: Practice and Inspiration of Child-friendly block construction Beijing Planning and Construction (01), 64-69.

[8] Liu Lei, Shi Nan, He Yanling et al. (2022) Child-friendly City Construction Practice. Urban Planning (01), 44-52.

[9] Wu Zhaofan, Lei Huixia. (2022) Analysis of the connotation and strategic framework of child-friendly streets: Based on the concept of child-friendly cities in China. Urban Planning (11), 32-41+51.

[10] BiBo, Shan Zhiran. (2021) Research on child-friendly historic district renewal design strategy: A case study of Xiangchang road school district. Urban construction (07), 52+ 49-198.

[11] Zeng Peng, Cai Liangwa. (2018) Study on safe blocks and travel routes under the Child-Friendly City Concept: A case study of the Netherlands. Urban Planning (11), 103-110.

[12] Jia Siyi, Hou Xiaolei. (2021) Research on Landscape design strategy of Child-friendly urban block public space. Journal of Landscape Design (06), 26-33.

[13] Guan Jingchun. (2021) Research on public space boundary design of child-friendly urban blocks. Urban Architecture (13), 68-71.

[14] Wang Hongmei. (2023) An analysis on urban high-quality development paths from the perspective of child-friendly cities. Shanghai Commerce (02), 234-237.