

# A Study on the Current Situation and Optimization Strategies of Preschool Education Resource Allocation under the Background of Population Decline: Empirical Evidence from Chengdu

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**Abstract:** Under the dual pressures of negative population growth and urban migration, the equitable allocation of preschool education resources is a vital metric of modern urban governance. This study utilizes 2024 resident population and road network data for Chengdu's 12 central districts to evaluate the spatial accessibility and distributive equity of inclusive kindergartens. Employing the Gaussian two-step floating catchment area (2SFCA) method and Gini coefficients, the analysis reveals a "core-periphery" demand structure characterized by high-pressure central districts and service gaps in peripheral expansion zones. While resource totals are significant, high-quality provision exhibits centripetal polarization, creating a structural "access-quality" gap. Significant disparities exist between main and non-main urban areas, with Gini coefficients indicating substantial inequity in quality resource distribution. To enhance spatial justice, this paper proposes dynamic enrollment planning based on population forecasting, cross-district rotation to bridge quality gaps, and a restructured fiscal framework focused on teacher compensation to ensure sustainable, high-quality preschool provision in megacities. **Keywords:** Inclusive Preschool Education; Population Decline; Resource Allocation; Spatial Equity

## 1. Introduction

Building an inclusive preschool education public service system is a key strategy in China's current educational development, aiming to provide high-quality education that meets public demand [1]. The 2025 Central Urban Work Conference emphasized shifting urban development from expansion to stock improvement, highlighting equal access to public services and spatial justice [2]. As a core

public service, the equity of inclusive preschool education resources reflects governance modernization in megacities. Despite China achieving a 91.61% coverage of inclusive kindergartens in 2024 [3], population decline has caused both surplus capacity in some areas and overcrowding in central urban zones, creating a complex mismatch between supply and demand [4-8]. Efficient allocation and alignment with population mobility have thus become pressing challenges.

Existing studies focus on two aspects. First, the spatial measurement of resource equity, often using GIS [9,10], two-step floating catchment area (2SFCA), and gravity models to evaluate accessibility and distribution [11-15]. Second, the analysis of influencing factors, such as household registration constraints and institutional advantages, which exacerbate inequities [16-18]. However, gaps remain: most studies examine urban-rural differences, neglect intra-urban disparities in megacities, and rely on registered rather than resident populations. Considering actual population distribution is crucial for improving service provision and reducing child-rearing costs.

This study examines inclusive kindergartens in Chengdu, applying the Gaussian 2SFCA method to measure accessibility and analyze allocation under population decline. Chengdu, a megacity with 21.474 million residents and 2,729 kindergartens serving 562,800 children (inclusive kindergarten coverage 87.59%), provides a representative case for informing inclusive preschool education policy in China's large cities.

## 2. Research Design

### 2.1 Research Framework

Inclusive kindergartens refer to an institutional form of provision that, under government guidance and support, is constrained by

reasonable fees, guarantees basic educational quality, and provides universally accessible preschool education services to the public. Against the background of declining fertility rates, the total amount of preschool education resources tends to be saturated, and the quality of educational resources as well as the equity of their distribution have become the core issues in the development of preschool education. In some megacities, including Chengdu, admission policies for inclusive kindergartens have gradually weakened the constraints of the household registration system and are moving toward full coverage of the resident population. However, due to the uneven distribution of resources within cities and significant differences in the quality of education among kindergartens, the allocation of inclusive preschool education resources has not yet achieved spatial balance. High-quality kindergartens are concentrated in mature areas, while newly developed areas and private inclusive kindergartens lack sufficient resources, and the quality of kindergartens varies considerably. Therefore, from the perspective of spatial equity, this study focuses on the following key questions: (1) Is the allocation of inclusive preschool education resources in megacities equitable, and what spatial imbalance problems exist? (2) What factors lead to the spatial imbalance in the allocation of inclusive preschool education resources? (3) How can the spatial equity of inclusive preschool education resource allocation in megacities be improved? Based on the above questions, this study proposes the concept of spatial accessibility of inclusive preschool education resources, which refers to the possibility for each demand point to obtain inclusive preschool education resources within a limited commuting time. Its measurement depends not only on the transportation time cost in geographic space but also on the ratio of supply to demand within the study area. Generally, the higher the accessibility, the greater the opportunity and convenience for age-appropriate children at that demand point to obtain nearby inclusive preschool education resources.

## 2.2 Data

This study selects 12 central districts of Chengdu as the research area. The regional development shows a trend of diffusion from the center to the surrounding areas, which provides good

representativeness for the data. All data used in this study are from the year 2024, and mainly include three types. First, attribute data of inclusive kindergartens in 2024 were obtained from the official website of the Chengdu municipal government, and their location information was identified. Second, resident population data by age structure for each district were obtained from the Seventh National Population Census, as well as population data from the Chengdu Statistical Yearbook (2020-2023). A logistic population model was fitted in Matlab to estimate the number of children aged 3-6 in each community in 2024. In addition, administrative boundary data were obtained from the National Geomatics Center of China, and road network data were sourced from OpenStreetMap. The study area was divided into grids of  $1 \text{ km} \times 1 \text{ km}$ . Demand points were set as the center points of the grids, while supply points were defined as the spatial coordinates (POI) of inclusive preschool education resources in Chengdu obtained through geocoding via the Amap API.

## 2.3 Method

This study first calculates the potential demand for inclusive preschool education resources in each region and the transportation time cost of accessing such resources, and then measures spatial accessibility on this basis.

### 2.3.1 Analysis of potential demand

Taking kindergartens as the center and combining road network data, the total number of resident children of appropriate age that can be served within a 15-minute driving distance is calculated to obtain the potential demand  $D_i$  for inclusive preschool education resources. By comparing  $D_i$  with the actual number of enrolled children in kindergartens, the supply-demand situation of inclusive preschool education resources in Chengdu can be preliminarily understood, providing a basis for the measurement of spatial accessibility.

### 2.3.2 Calculation of travel time cost

Using grids as units, the time  $D_{ji}$  required for each grid center point  $j$  to reach each supply point  $i$  is calculated. When  $T_{ji} \leq 15$  minutes, the supply point is considered capable of providing corresponding preschool education services to the demand point. The average travel time to all supply points reachable within 15 minutes is calculated to obtain the travel time

cost for each grid. In the road network system, the travel speeds of expressways, primary roads, secondary roads, and branch roads are set at 60 km/h, 40 km/h, 30 km/h, and 20 km/h, respectively, based on existing studies.

2.3.3 Measurement of spatial accessibility

The two-step floating catchment area (2SFCA) method expresses access to services as the cumulative value of supply-demand ratios [19]. While evaluating spatial accessibility from a geographical perspective, it also reflects the service supply capacity of resources and can better identify low-value areas, thus providing stronger reference value for real-world simulation. To ensure that the research results better reflect reality, this study introduces a Gaussian decay function based on the traditional two-step floating catchment area (2SFCA) method. The models and indicator calculation formulas of the improved 2SFCA method are as follows:

$$D_i = \sum_{d \in \{T_j \leq T_{0i}\}} D_{jk} \quad (1)$$

$$R_i = \frac{S_i}{D_i} \quad (2)$$

Taking each preschool education resource supply point *i* as the center, a search radius of 5 km is defined. Based on the road network, network analysis tools are used to calculate the travel time  $T_{ij}$  from supply point *i* to demand point *j*. When  $T_{ij} > 15$  minutes, the commuting time exceeds the 15-minute living circle threshold, and the population in grid unit *j* is assumed not to choose kindergarten *i*. The number of age-appropriate children  $D_j$  within the 15-minute range is then summed to obtain the actual demand  $D_i$ . The number of full-time teachers at supply point *i* is taken as the supply capacity  $S_i$ , and the supply–demand ratio  $S_i$  of inclusive preschool education resources is calculated.

$$G(t_{ji}, t_0) = \begin{cases} \frac{e^{-\left(\frac{t}{2}\right) \times \left(\frac{d_i}{d_0}\right)} - e^{-\left(\frac{t}{2}\right)}}{2}, & \text{if } d_{ji} \leq d_0 \\ 0, & \text{if } d_{ji} > d_0 \end{cases} \quad (3)$$

$$A_j = \sum_{i \in \{t_{ji} \leq t_0\}} G(t_{ji}, t_0) R_i \quad (4)$$

Taking each demand point *j* as the center, a 5 km search radius is defined. The supply–demand ratios  $R_i$  of all supply points *i* within the search area are weighted using the Gaussian function. The weighted supply–demand ratios are then summed to obtain the accessibility of educational resources at each demand point *j*.

3. Empirical Results

3.1 Accessibility Analysis of Inclusive Preschool Education Resources

3.1.1 Spatial demand: high pressure in central urban areas under centripetal agglomeration

This study takes inclusive kindergartens as core nodes and conducts calculations based on regional road network data, focusing on the total number of resident children of appropriate age within a 15-minute commuting radius, in order to determine the potential demand scale of inclusive preschool education resources (Figure 1). The results show that the potential demand for inclusive preschool education in Chengdu exhibits a significant “core–periphery” concentric structure. Central urban districts represented by Wuhou, Jinjiang, Qingyang, Jinniu, and Chenghua are under high-pressure conditions, with demand values ranging from approximately 55,357 to 76,700, forming extremely tight central pressure zones. As the spatial radius expands outward, suburban districts such as Wenjiang, Pidu, and Shuangliu show moderate expansion in demand, while peripheral areas such as Xinjin and Qingbaijiang remain in a relatively low-pressure and stable state.

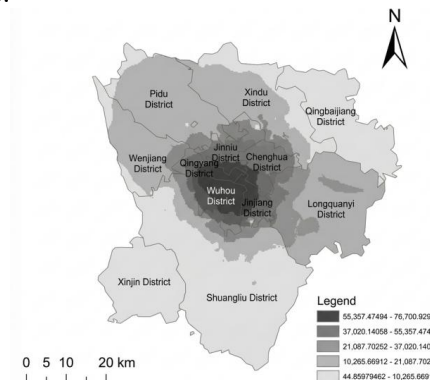


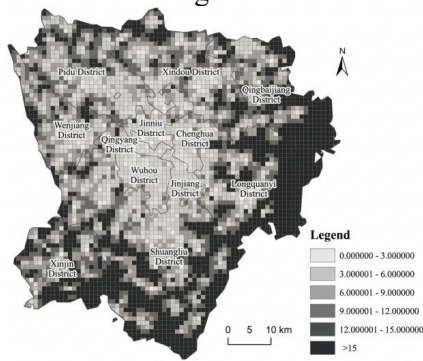
Figure 1. Potential Demand for Universal Pre-school Education Resources

Note: Demand values are measured in persons per kindergarten.

3.1.2 Spatial accessibility: insufficient service coverage in peripheral expansion areas

Under the constraint of the 15-minute commuting threshold for inclusive preschool education resources, the distribution of travel time costs for accessing such resources across grid units in Chengdu is shown in Figure 2. The results indicate that travel time costs exhibit a clear spatial pattern characterized by “low in the center and high in the periphery,” with a point-like dispersion pattern. Central districts such as

Jinniu, Qingyang, Jinjiang, Wuhou, and Chenghua demonstrate high service density and well-developed transportation advantages. However, as distance from the city center increases-particularly in eastern Longquanyi, northern Xindu, and southern Shuangliu-areas with travel times exceeding 15 minutes form large contiguous zones, creating evident service blind spots or transportation barriers. This spatial disparity essentially reflects a mismatch between the service radius of basic public services and the physical expansion of urban space. In peripheral zones and newly developed areas, inclusive preschool education resources have not yet formed a grid-based coverage network, resulting in higher commuting opportunity costs for families in accessing educational services.



**Figure 2. Travel Time Cost of Accessing Universal Pre-school Education Resources**

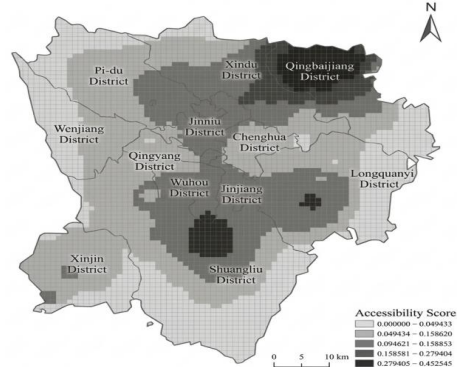
Note: Time is measured in minutes.

**3.1.3 Spatial quality: spatial mismatch and polarization of high-quality educational resources**

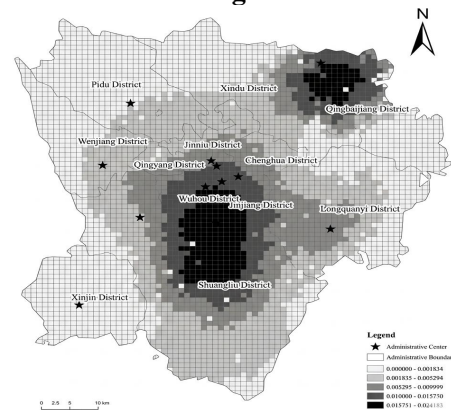
To further identify spatial differences in accessibility, this study uses the natural break classification method in ArcGIS to generate spatial distribution maps of accessibility for inclusive kindergartens (Figure 3). The results show that the spatial distribution of inclusive preschool education resources exhibits a dual characteristic of relatively balanced total quantity and polarized quality. High-value service areas in terms of overall accessibility are mainly concentrated in the urban core and extend northward, forming relatively continuous service coverage zones.

However, when focusing on high-quality resources (Figure 4), the spatial pattern changes significantly. High-quality resources show strong centripetal concentration, with peak accessibility highly compressed in the central areas around Wuhou, Jinjiang, and Shuangliu. Meanwhile, northern regions that were

advantageous in total quantity show a clear decline in accessibility to high-quality resources. This pattern reveals a hierarchical imbalance in public service provision. Although the overall coverage of inclusive resources has reached a certain scale, high-quality resources remain highly concentrated in traditional administrative centers and densely developed areas. As a result, peripheral areas face a structural contradiction characterized by “access to kindergartens but difficulty accessing high-quality ones,” indicating that the focus of public service equalization has shifted from quantity to quality.



**Figure 3. Accessibility of Universal Kindergartens**



**Figure 4. Accessibility of First-Class Universal Kindergartens**

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### 3.2 Evaluation of Spatial Equity Based on Accessibility

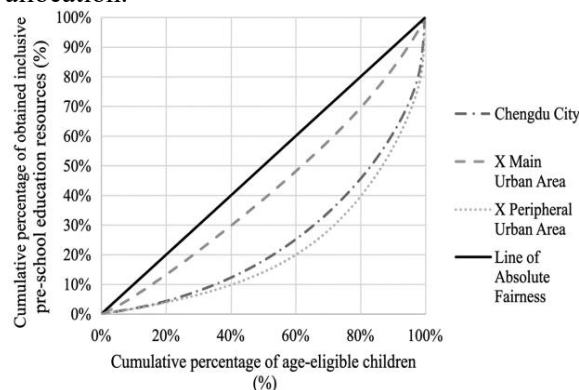
To further assess the overall balance of inclusive preschool education resource allocation in Chengdu, this study introduces the education Gini coefficient and a spatial equity index (SE) integrating Moran's I to quantitatively evaluate spatial equity.

The Gini coefficient and Lorenz curve were originally used to measure income inequality [20]. This study adopts the approach of applying the Gini coefficient to measure disparities in education resource accessibility. The Gini value ranges from 0 to 1, with higher values indicating greater inequality. Specifically, values within [0, 0.2) indicate absolute equality, [0.2, 0.5) indicate relative equality, and values above 0.5 indicate significant inequality.

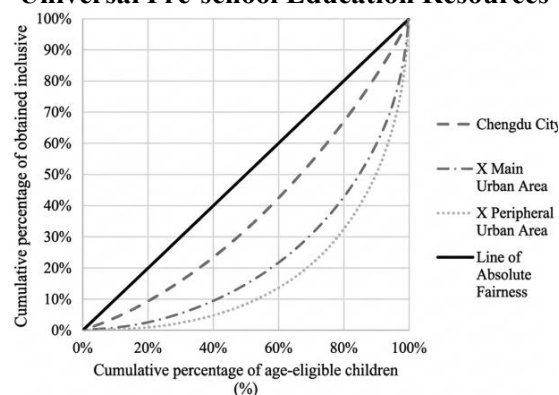
The Lorenz curves of accessibility for inclusive and high-quality inclusive preschool education resources in Chengdu are shown in Figure 5 to Figure 6, and the corresponding Gini coefficients are presented in Table 1.

From the perspective of resource distribution, nearly 70% of children in central districts only have access to about one-third of inclusive preschool education resources, indicating a significant imbalance. Inequality is even more pronounced for high-quality resources, where over 90% of children only access about half of such resources. Comparison of the Lorenz curves shows that non-central districts deviate more significantly from the line of absolute equality, indicating more severe inequality in

both inclusive and high-quality resource allocation.



**Figure 5. Lorenz Curve of the Accessibility of Universal Pre-school Education Resources**



**Figure 6. Lorenz Curve of the Accessibility of High-quality Universal Pre-school Education Resources**

At the citywide level, the Gini coefficient for accessibility of inclusive preschool education resources is 0.560059, exceeding the threshold of 0.5 and indicating overall imbalance. In non-central districts, the Gini coefficient reaches 0.500707, reflecting particularly prominent inequality. This is mainly due to lower urbanization levels, mismatches between supply and demand, and uneven population distribution. In contrast, the five central districts show relatively balanced allocation, with a Gini coefficient of 0.166385, falling within the range of absolute equality. This is largely due to higher population density and better transportation infrastructure, which improve the matching between resource distribution and demand.

For high-quality resources, disparities are even more pronounced: the Gini coefficient is 0.255261 in central districts but reaches 0.665920 in non-central districts, indicating severe inequality. This reflects the long-term concentration of high-quality educational resources in central areas and better accessibility due to superior infrastructure.

**Table 1. Measurement Results of Equity in the Allocation of Inclusive Early Childhood Education Resources**

Region	G1	G2
Central Urban Area(2)	0.560059	0.609701
Main Urban Area(5)	0.166385	0.255261
Non-Main Urban Area(7)	0.500707	0.66592

Note: G1 is the Gini coefficient of accessibility to inclusive early childhood education resources, and G2 is the Gini coefficient of accessibility to high-quality inclusive early childhood education resources.

#### 4. Optimization Strategies under Population Decline

##### 4.1 Improve Population Forecasting and Enrollment Planning

Changes in fertility rates directly affect education demand and enrollment supply [21]. The Opinions on Implementing the Action Plan for Expanding and Improving the Quality of Basic Education in the New Era propose that “by 2027, a mechanism for adjusting kindergarten enrollment capacity in line with trends in the school-age population should be established, and high-quality early childhood education resources should be expanded... while coordinating the allocation of educational resources with changes in enrollment demand.” This indicates that population forecasting and enrollment planning mechanisms should be improved to better address the mismatch between population demand and the supply of educational resources. A dynamic enrollment planning mechanism should be established based on population forecasting. Multi-departmental collaboration and big data integration should be used to track population mobility and guide resource allocation. At the same time, kindergartens should be encouraged to adopt small-class and specialized development models to better match population distribution.

##### 4.2 Reduce Quality Disparities and Promote High-Quality Development

Under population decline, the main contradiction in preschool education has shifted from insufficient access to unequal quality. A comprehensive quality monitoring system should be established, covering inputs, processes, and outcomes [22]. Evaluation results should be linked to funding allocation and institutional incentives. Low-quality institutions should exit

the system, while high-quality ones should be rewarded [23]. In addition, a mandatory teacher rotation mechanism across districts should be implemented to break regional monopolies of high-quality teaching resources and promote balanced development.

##### 4.3 Improve Fiscal Mechanisms and Ensure Sustainability

With declining birth rates, many kindergartens face closure risks. The key issue is no longer expansion, but sustainability [24,25]. Fiscal mechanisms should shift from subsidizing enrollment capacity to covering operational costs, especially teacher salaries [26]. Current restrictions that prohibit subsidies from being used for personnel expenses should be relaxed. Ensuring stable teacher income is essential for maintaining quality and preventing institutional collapse.

#### 5. Conclusions

Against the backdrop of population decline and intensified urban mobility, this study examines the spatial allocation of inclusive preschool education resources in Chengdu’s central districts by integrating the Gaussian two-step floating catchment area method and the Gini coefficient. The findings reveal several key conclusions.

First, although the overall supply of inclusive preschool education resources in Chengdu has reached a considerable scale, their spatial distribution remains uneven. A clear “core–periphery” structure is observed, with central urban districts experiencing high demand pressure, while peripheral and newly developed areas suffer from insufficient service coverage and longer travel time costs. This indicates that the spatial expansion of the city has not been matched by a corresponding extension of public service provision.

Second, the study identifies a structural imbalance between accessibility and quality. While the accessibility of inclusive resources in terms of quantity is relatively balanced, high-quality preschool education resources exhibit strong centripetal agglomeration in core urban areas. This results in a prominent “access–quality gap,” where residents in peripheral areas may have access to kindergartens but face difficulties in accessing high-quality ones. The focus of equity in preschool education has thus shifted from ensuring basic access to improving

quality distribution.

Third, the evaluation based on the Gini coefficient further confirms significant spatial inequities, particularly in the distribution of high-quality resources. While central districts demonstrate relatively high levels of equity due to better infrastructure and population density, non-central districts show pronounced inequality, reflecting mismatches among population distribution, resource allocation, and urban development levels.

Finally, this study highlights that under conditions of population decline, the core challenge of preschool education governance is no longer merely expansion, but the optimization and restructuring of existing resources. Improving spatial equity requires a transition toward demand-oriented allocation mechanism and institutional reforms that prioritize quality improvement and long-term sustainability.

In conclusion, achieving equitable and high-quality preschool education in megacities requires not only increasing resource supply but also addressing spatial disparities through refined governance strategies. The Chengdu case provides empirical evidence and policy insights for other large cities facing similar demographic and spatial transformation challenges.

## References

- [1] LIU J W, JIANG Y, SHEN K R. Evaluation of Government Responsibility in Universal Pre-school Education Public Services: Theoretical Logic, Index Construction, and Empirical Analysis. *Journal of East China Normal University (Educational Sciences)*, 2025, 43(10): 116-135.
- [2] XU L, LUO X H, YUE Z. Earnestly Studying and Implementing the Spirit of the Important Speech at the Central Urban Work Conference to Promote High-quality Urban Development and Build a Modern People's City. *Nanfang Daily*, 2026-03-19(A01).
- [3] YANG X L. Shaanxi Releases Mid-term Implementation Results of Women and Children Development Plan. *Shaanxi Daily*, 2026-03-11(003).
- [4] ZHENG C C, JIANG Y, WANG J, et al. Analysis of Spatial Characteristics and Equilibrium of Regional Configuration of Public Pre-school Education Resources. *early Childhood Education Research*, 2017, (02): 17-26.
- [5] YAN S. From Governing the City to City Governance: A Political Analysis of Urban Spatial Justice. *Journal of Huazhong University of Science and Technology (Social Science Edition)*, 2017, 31(4): 6-10.
- [6] WANG Y F, JIANG Y. Measurement and Analysis of the Development Level of Universal Pre-school Education Public Services in China. *Journal of Hunan Normal University (Educational Science)*, 2022, 21(4): 16-24.
- [7] LI H, CHEN J J. Evolution of the Early Childhood Curriculum in China: The Impact of Social and Cultural Factors on Revolution and Innovation. *Early Child Development and Care*, 2017, 187(10): 1471-1483.
- [8] ARCHAMBAULT J, CÔTÉ D, RAYNAULT M F. Early Childhood Education and Care Access for Children from Disadvantaged Backgrounds: Using a Framework to Guide Intervention. *Early Childhood Education Journal*, 2020, 48(3): 345-352.
- [9] SHI G H, FENG J Y, WANG T. From Pre-school Education Universality to Universal Pre-school Education: Analysis of Research Hotspots and Frontiers of Universal Pre-school Education in China from 2010 to 2022 *Theory and Practice of Education*, 2023, 43(17): 33-38.
- [10] HONG X M, MA Q, ZHONG B L. The Current Situation, Problems and Optimization Path of Kindergarten Layout in Beijing: An Analysis Based on GIS. *Journal of Capital Normal University (Social Sciences Edition)*, 2019, (2): 158-168.
- [11] XU Y Z, LAN C, FENG W Z. Research on the Optimization of Spatial Layout of Regional Universal Pre-school Education Resources from the Perspective of High-quality Equilibrium. *Journal of Normal University (Philosophy and Social Sciences Edition)*, 2024, 45(06): 145-153.
- [12] LUO X, LAI Z Y, CHEN J. Optimization Strategy of Kindergarten Spatial Resource Allocation in Shanghai Inner City Based on Time Accessibility: A Case Study of Pudong New Area. *Shanghai Urban Planning*, 2022, (04): 102-108.
- [13] CHENG M, HUANG W W. Spatial Accessibility Evaluation of Elderly Care Facilities in Shanghai Based on Gaussian Two-step Floating Catchment Area Method. *Journal of Fudan University (Natural*

- Science), 2020, 59(2): 129-136.
- [14] MA Y, LI D P, ZHOU L, et al. Evaluation of Spatial Accessibility and Supply-demand Matching of Basic Education Resources in the Central City of Changsha. *Tropical Geography*, 2021, 41(5): 1060-1072.
- [15] ZHANG Z H, SUN S M, WANG X. Analysis of Spatial Pattern and Influencing Factors of Medical Public Service Accessibility in Mega-cities: A Case Study of Shanghai. *Scientia Geographica Sinica*, 2022, 42(4): 622-630.
- [16] RUAN C W. Allocating Compulsory Education Resources Based on the Scale of Permanent Population: Logic Generation and Policy Optimization. *Educational Research*, 2023, 44(04): 94-105.
- [17] GUO Y J. Analysis of the Current Situation and Influencing Factors of Social Insurance Participation of Rural Migrant Population. *Operations Research and Fuzziology*, 2023, 13: 3861.
- [18] FENG H, LU M. School Selection Through Housing Purchase: Empirical Evidence and Policy Implications of the Impact of Education on Housing Prices. *The Journal of World Economy*, 2010, (12): 89-104.
- [19] LIU H Y, CHEN W. Review of Research on the Layout of Basic Education Resources in China. *Progress in Geography*, 2017, 36(5): 557-568.
- [20] ZHANG W M. Analysis of Education Resource Allocation in China and Policy Choices: Based on the Calculation of Education Gini Coefficient. *Journal of Renmin University of China*, 2013, 27(4): 89-97.
- [21] KEILMAN N. Uncertainty in Population Forecasts for the Twenty-first Century. *Annual Review of Resource Economics*, 2020, 12(1): 449-470.
- [22] LI Y H, YANG X P, FAN Y B. Practical Encounters and Path Transformation of Universal Kindergarten Construction Under the Background of Expanding Quality and Improving Efficiency Action. *Journal of the Chinese Society of Education*, 2024, (4): 14-21.
- [23] CAI Y Q, WANG J Y. Equity and Efficiency: The Dual Value Pursuit of Universal Pre-school Education Resource Allocation. *Journal of Hebei Normal University (Educational Science Edition)*, 2024, 26(6): 121-130.
- [24] LIU Y. Paths and Directions for the Development of Universal Kindergartens. *Educational Research*, 2019, (3): 25-28.
- [25] LIN R, WANG H Y, WEI C. Embedding and Adaptation: A Sociological Analysis of the Survival Status of Teachers in Universal Private Kindergartens. *Research in Educational Development*, 2019, 39(8): 41-48.
- [26] WANG D. Constructing a Reasonable Cost-sharing Mechanism for Universal Kindergartens. *Education Science*, 2017, 33(3): 78-84.