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A Study on the Urban-Rural Disparity in Educational Resource Allocation for Primary and Secondary Schools

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Abstract. Allocation of educational resources affects the learning environment and equality of opportunity for students. Frontline teachers' views on the urban-rural disparity in educational resources for Chinese primary and secondary schools are investigated in this study. An exploratory comparative design was used, and based on questionnaire responses from 26 teachers, six were from urban schools and twenty were from rural or township schools. Teacher staffing and qualifications, school facilities, digital resources, curriculum implementation, professional development, family cooperation, funding and policy execution were also analysed. Therefore, the deficiencies in urban and rural areas cannot be confined to primary and secondary school facilities. Rural teachers reported more restrictions in specialist staffing, professional development, curriculum provision, digital resources, family support and the actual implementation of educational balancing policies. Teachers in both groups also listed the recruitment, training and retention of teachers as problems. Therefore, in addition to the supply of resources, schools need to have the ability to use and maintain these resources effectively for educational equity. Due to the small and unequal sample and the reliance on self-reported data, the findings should be interpreted as exploratory. Future research should use larger samples and combine teacher perspectives with student, school, and longitudinal data to further examine how resource allocation affects educational opportunities.

Keywords: urban–rural educational disparity, educational resource allocation, teacher resources, educational equity, learning opportunities

1. Introduction

Educational equity is a basic requirement for social equity, and the disparity in education between urban and rural areas has long been a significant problem in the country [1]. For a long time, China has had a dual structure of urban and rural areas in education, so this problem is particularly serious, and the country's push for educational modernisation has made "high-quality balance" an explicit policy objective. With the shift of compulsory education from the era of "basic balance" to "high-quality balance", the urban-rural gap in hardware conditions for schools, such as buildings, equipment and facilities, has been gradually narrowing [2]. Convergence in physical conditions does not guarantee equal educational opportunities. Other socially embedded factors of educational

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inequality, such as family support, teacher quality, student composition and local policy implementation, continue to affect the educational experiences and learning resources of urban and rural students. However, there is no research on the own awareness and understanding of this gap among front-line teachers, and the two sides have rarely been combined for verification to determine if there is any difference in interpretation. Teachers are users of the educational resources and first-hand witnesses to the problems, and their own experiences can provide rich, albeit often overlooked, references [3]. They have directly experienced the differences in teaching staff, facilities, curriculum and professional development, and at the same time, they can also observe how these conditions affect the students' life of learning and family support.

Based on surveys of urban and township teachers, this study therefore asks: (1) how do the urban-rural differences in soft resources manifest among teaching staff, home and school support, and policy implementation; (2) are there any convergence in perception of the gap among teachers in advantaged and disadvantaged areas; and (3) what factors do teachers believe are responsible for these differences? In light of the above problems, this study hopes to provide an initial reference for various aspects of the urban-rural education gap and their potential effects on students' learning.

2. Literature review

2.1. The current situation of urban-rural resource disparities in China

Urban-rural differences in educational resources still exist, but their forms are changing. Official statistics show marked improvement in the rural teaching force: by 2022, 76.01% of rural compulsory-education teachers held a bachelor's degree or above, up 35.29 percentage points from 2012 [4]. At the same time, there are changing gaps rather than gone ones. Rural teachers are still behind their urban counterparts in terms of educational attainment; in 2021, the proportion of urban lower-secondary teachers with postgraduate degrees exceeded that of rural teachers by about 7.3 percentage points. Structural shortages in music, art, physical education and English persist, and the rural workforce is significantly older; teachers over 55 account for 8.8% in rural areas compared to only 3.3% in cities [4]. Data from the National Yearbook show that teachers are still leaving rural schools for urban ones [5]. Comparable shifts have emerged in digital resources, where the gap is now an issue of use rather than access [6, 7], and in teacher mobility, low pay and blocked promotion are causing a significant exodus among young teachers [8]. The changing subjects of teaching and the resources available will likely affect what and how rural students are taught.

2.2. Educational resources and educational opportunities

Whether the common national curriculum can be realised as equal educational opportunities is still unknown in recent years. Research on educational inequality has shown that standardised provision alone cannot address the differences in students' educational experiences because the resources available at home and in the community shape how formal schooling is accessed and experienced [9]. At present, attention in China is increasingly being paid to the uneven distribution of family educational resources, social networks and community conditions supporting the ostensibly uniform education system. There will still be some differences among them, even if the schools teach the same content according to the curriculum and have the same entrance requirements. Therefore, the level of educational equality should not be judged solely by the uniformity of institutional inputs. Focus on how various forms of resources are used in relation to the circumstances of schooling and what opportunities for participation, learning and growth they provide for students.

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2.3. Theoretical foundation

The two theories are combined in this study. According to human capital theory, education is an investment that, by adding inputs to the educational system, can enhance the knowledge, skills and abilities of students to lay a foundation for learning differences in educational resources and varying outcomes [10]. Social reproduction theory also indicates that differences in economic and cultural resources lead to the transmission of inequality in education, thus perpetuating disparities in students' educational experiences and results [11]. This view is especially relevant in China, and the resources and educational environments of families may affect students' learning outcomes [11]. Together, the two views offer all-weather protection for the exploration of both the demand reasons for educational resources and why their effects differ among students and environments.

In short, previous research has generally studied resource allocation, teacher supply and family background in isolation, and has seldom combined them from the perspective of frontline teachers who are at the intersection of these problems. Based on the above theory, this paper compares the educational resource situations in urban and rural areas to explore how differences in these resources may affect students' learning outcomes and, based on teachers' observations in both areas, propose specific efforts to reduce the disparity.

3. Methodology

A study of the differences in educational resources between urban and rural areas from teachers' perspectives was conducted. A total of 26 valid answers were collected, and among them, 6 teachers came from urban areas and 20 from rural or township schools in China. A structured questionnaire has been developed to cover all links in the chain of educational resources and learning conditions, such as teachers' qualifications and staff, school facilities and digital resources, curriculum provision, professional development, family support, student circumstances, educational funding and policy implementation. Teachers also gave their views on the extent and main reasons for the urban-rural educational gap. Separate the responses into the urban and rural groups for comparison, and any unanswered questions in this section will be excluded from the final count for that question. Based on the data, the frequency and proportion of the main dimensions of educational resources and their likely effects on students' learning opportunities have been analysed. Given that the sample is small and unevenly distributed, only descriptive statistics can be obtained from it; no statistical inference, causal analysis or comparison of urban and rural schools at an aggregate level has been carried out. Voluntary participation is required, and all the feedback will be collected anonymously without revealing personal information.

4. Results

4.1. Teacher resources and school conditions

The results show that the teachers' material resources in urban and rural schools are different. All urban teachers reported having enough subject staff; only 30% of rural teachers thought the staff situation was generally good, and most mentioned some kind of shortage. The difference was most pronounced among specialists; 83.33 per cent of the urban respondents had access to full-time specialist teachers, and none of the rural respondents did. Teachers had different levels of education and professional training. All urban residents were college graduates or above; most rural residents had a high school diploma or less. In addition, the matching rate of city teachers with teaching areas

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based on their academic backgrounds was 66.67%, but it was only 30% for rural teachers. About half of the rural residents said that there was no training in the past year.

Therefore, the lack of teachers may not be the only reason. Teacher Specialisation, qualifications and opportunities for professional development are also relevant. Therefore, rural schools appear to be facing problems of both teacher shortage and lack of qualified teachers in their teaching staff.

4.2. Curriculum, digital resources and learning opportunities

There were also differences in school resources and curriculum organisation. Most urban schools have had relatively good basic facilities, but rural schools are lacking in special and advanced resources. All the urban teachers have reported full network coverage, but none of the rural teachers have experienced full 5G/Gigabit coverage. Innovation classrooms are available in 50% of the urban schools and none of the rural schools. Curriculum Provision also had a large difference. All urban teachers have implemented the required curriculum fully, and no rural teachers have been fully provided with all the necessary courses. More than half of the rural teachers said that some courses were overtaxed or covered by substitutions. Urban schools have many more clubs and extracurricular activities.

The Pattern of Digital Learning is Uneven. Urban schools generally have good online resources, but they are not always used to their full extent. Rural schools have had less access to and use of these resources, and not all teachers have been able to incorporate them into their teaching. Based on the above results, the educational opportunity gap is not only due to a lack of resources but also to differences in the quantity and regularity of learning opportunities provided by different schools.

4.3. Family support, policy conditions and teachers' perceptions

The differences observed at the school level were accompanied by different family environments for the students. Rural teachers reported a higher proportion of vulnerable students and more limitations in parental participation. Seventy per cent of the parents were employed and had little time to participate in their children's education. Urban teachers generally reported better parental cooperation and more regular communication between schools and families. Funding and Policy Implementation also varied. All urban teachers considered school funding sufficient or relatively sufficient, compared with 55% of rural teachers. Meanwhile, 65% of rural teachers considered the practical effects of relevant educational balancing policies to be weak. Teachers' awareness of the urban-rural gap was also relatively low. Seventy per cent of the rural teachers considered the gap to seriously restrict rural education. Geographical isolation and a lack of teachers were cited by 95% of the rural teachers, and 80% said that qualified teachers moved to urban schools. Urban teachers also pointed out that teacher mobility and difficulties in attracting rural talent are problems. Approximately two-thirds of the respondents in both groups listed reasons for the deficiencies in teacher recruitment, training and retention. Overall, the results show many forms of urban-rural disparities in teacher resources, school facilities, curriculum provision, family support and policy implementation. The lack of resources is not uniform; rather, there are different deficiencies at various stages in the provision of educational opportunities for students.

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5. Discussion

5.1. Educational resources and unequal learning opportunities

Based on the above research, urban-rural educational disparities can be better understood as differences in the supply, selection and application of educational resources, rather than only deficiencies in basic facilities. At present, the most obvious deficiencies are the lack of specialist teachers, innovative facilities, diverse curricula, digital resources and extracurricular activities. According to the previous study, education is unevenly distributed in space; that is, people in different places have different access to educational resources and opportunities [1]. The rural-urban division in China is also reflected in the general institutional and economic conditions that affect the returns to education for students [2]. Therefore, the formal standardisation of curriculum and basic schooling provision does not necessarily lead to the same educational outcomes. Although a school may have access to digital platforms, specialised facilities or new curriculum resources, these will not benefit students unless teachers, funds, technical support and sufficient time in the curriculum are available for their proper use. Therefore, the distribution of educational opportunities is also related to how well schools can utilise the available resources for teaching and learning.

5.2. Teacher capacity and resource utilisation

Teacher capacity was also one of the reasons for the urban-rural gap. Rural teachers mentioned that teachers are unavailable, specialist staff are lacking, professional training opportunities are scarce, etc. Therefore, teacher inequality may be due to a lack of teachers or insufficient utilisation of available educational resources by teachers. Previous research in China has also found differences in teachers' digital teaching ability between rural and urban schools. Based on data from 11,784 K-12 teachers, Lin and others have found that rural teachers have relatively lower levels of ICT skills, data literacy, and overall digital teaching ability compared to their urban counterparts; in particular, the deficiencies in ICT skills and data literacy are pronounced [7]. Based on the above analysis, it can be concluded that educational resources are not self-standing and also depend on the teachers' usage. Where staffing is inadequate or opportunities for professional development are scarce, teachers may be unable to integrate digital tools, new curricula and other specialised activities in their teaching. Research on teachers in China has also highlighted the importance of teacher quality, working conditions and policy environment in shaping teaching practice [3]. Therefore, the current research indicates that in promoting educational equity, attention should also be paid to teacher recruitment, professional development and retention, as well as physical resources.

5.3. Family, school and policy environment

Therefore, the problems in education are not only about school resources. Rural teachers reported more deficiencies in parental participation, school-family cooperation, students' circumstances and policy implementation. Therefore, the differences in learning opportunities among students are due to various factors in their schools and their communities. Research on cultural capital has shown that educational inequality can also be perpetuated by differences in the resources and attitudes students bring to school [11]. In China, the rural-urban divide has also been linked to larger disparities in educational opportunities and returns to education [2]. At the policy level, the current results indicate that the formal measures to promote educational equity may not have the same effect in all schools due to differences in local funding, staffing, institutional strength and school-community

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relationships. In line with the general study of spatial inequality, educational opportunities are determined by one's location and institutional environment, rather than by provisions at the school level [1]. All of the above results indicate that urban-rural educational disparities are diverse. Different school resources may interact with teachers' abilities, family support and local implementation conditions to create various opportunities for students to receive educational benefits. Given the small and uneven sample in this study, only a description of the pattern can be drawn; causality has not been established. However, they also suggest that educational opportunities should be regarded not only in terms of whether resources are formally available, but also in terms of how effectively schools and teachers can utilise these resources in the students' daily learning.

6. Conclusion

This study investigated urban-rural differences in educational resource allocation for primary and secondary school teachers from their own experiences. According to the above analysis, the deficiencies in basic infrastructure extend to teacher personnel, specialist support, training and development, curriculum differentiation, digital resources, family cooperation and policy execution. Rural teachers reported more restrictions in all the above areas, and teachers from both urban and rural schools listed teacher recruitment, training and retention as serious problems. Therefore, to achieve educational equity, researchers must not only provide resources in schools but also ensure that these schools have the ability to use the resources well and offer high-quality learning opportunities for all students.

Several limitations should be acknowledged. Only 26 teachers participated in the study, and the number of urban and rural respondents was uneven; thus, the results cannot be applied to all schools in China. Teachers' own observations and a single questionnaire were also collected, so it cannot be determined whether the teaching materials led to any changes in students' performance. Teachers were the subjects of this study, and students, parents and school administrators were not directly involved. Therefore, future studies will have larger and more geographically diverse samples, and combine quantitative surveys with interviews, classroom observations, school-level data, etc. Longitudinal studies can track the effects of changes in the quality of teaching, digital resources, curriculum reform and policy implementation on students' educational opportunities over time. Therefore, the first question is how resources are distributed among urban and rural schools, and the second is whether these resources can be used effectively to create a good learning environment for students.

References

[1] Mishra, A., Mishra, A., & Pandey, G. (2023). Spatial inequality and education: Unraveling the geographical dimensions of educational disparities. *TechnoLearn: An International Journal of Educational Technology, 13*(1), 29–43.

[2] Fu, Q., & Ren, Q. (2010). Educational inequality under China's rural–urban divide: The hukou system and return to education. *Environment and Planning A, 42*(3), 592–610.

[3] Lo, L. N. (2021). Teachers and teaching in China: A critical reflection. In *Policy, teacher education and the quality of teachers and teaching* (pp. 53–73).

[4] Wu, N. (2023, September 22). Rural education revitalization as the key to building a strong education nation. *China Education News*.

[5] National Bureau of Statistics. (2023). *China statistical yearbook 2023*. China Statistics Press.

[6] Gong, B. (2022). The starting point, process and outcome of "Internet Plus" educational equity. *Journal of South China Normal University (Social Science Edition)*, (2).

DOI: 10.54254/2753-7048/2027.NL38279

[7] Lin, R., Chu, J., Yang, L., Lou, L., Yu, H., & Yang, J. (2023). What are the determinants of rural–urban divide in teachers' digital teaching competence? Empirical evidence from a large sample. *Humanities and Social Sciences Communications, 10*(1), 422.
[8] Hise, M. (2022). *Attrition, mobility, and retention patterns of public-school teachers*. Pepperdine University.
[9] Wu, X. (2010). Economic transition, school expansion and educational inequality in China, 1990–2000. *Research in Social Stratification and Mobility, 28*(1), 91–108.
[10] Spring, J. (2015). *Economization of education: Human capital, global corporations, skills-based schooling*. Routledge.
[11] Edgerton, J. D., & Roberts, L. W. (2014). Cultural capital or habitus? Bourdieu and beyond in the explanation of enduring educational inequality. *Theory and Research in Education, 12*(2), 193–220.