

Research on the Equalization of Educational Resources and Countermeasures in Qingdao

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Abstract: Qingdao, as a city with a higher level of economic and educational development, has always been a focal point of public concern regarding the allocation and utilization of educational resources. This paper explores the current status and main issues of the equalization of educational resources in Qingdao. It proposes countermeasures and suggestions for optimizing the allocation of educational resources, improving the efficiency of educational resource utilization, and promoting educational equity. The aim is to provide references and lessons for Qingdao and other regions in the equalization of educational resources.

Keywords: educational resources, equalization issues, countermeasure suggestions

Introduction

In the context of globalization, the equalization of educational resources is crucial for promoting social progress and economic development, directly affecting the future of nations and the fate of ethnic groups. With China's rapid economic growth and accelerated urbanization, the uneven distribution of educational resources between urban and rural areas, among different cities, and within cities themselves has become increasingly prominent. Qingdao, as an important city on the eastern coast of China, faces challenges in the distribution and utilization of educational resources. Despite efforts by Qingdao's government and educational departments to increase investment in education and improve rural educational facilities to promote balanced educational development, issues of scarce high-quality educational resources and unfair distribution still exist. This study aims to analyze the current status of educational resource distribution in Qingdao, identify challenges, and propose countermeasures. It explores the promotion of educational resource equalization through rational allocation, improved resource utilization efficiency, and the implementation of fairness measures to achieve educational equity, enhance educational quality, and foster comprehensive societal development.

1. Analysis of the current status of educational resources in Qingdao

1.1 Characteristics of educational resource distribution

The distribution of educational resources in Qingdao exhibits a marked urban-rural disparity, with urban schools generally having well-equipped facilities and strong teaching staffs, whereas schools in rural and remote areas face a shortage of resources, such as insufficient teaching staff and outdated teaching facilities. This directly impacts the quality of education and the learning environment for students. Within the city itself, areas with higher levels of economic development, such as the city center and coastal zones, possess more high-quality educational resources, while economically less developed areas suffer from a scarcity of educational resources. Moreover, high-quality educational resources in Qingdao tend to be concentrated in a few schools, leading to intense competition among a large number of

students and parents for these limited resources. This phenomenon has exacerbated the issue of school district housing, making access to educational resources closely related to family economic conditions and further intensifying educational inequality. With the development of information technology, some schools have begun to utilize digital educational resources and online education platforms to enrich educational resources. On one hand, this offers a potential solution to the uneven distribution of educational resources; on the other hand, it also showcases the trend towards modernization and digitalization of educational resources in Qingdao. These characteristics point to the direction for future optimization and equalization of educational resources, highlighting the need to further narrow the urban-rural divide, promote the balanced distribution of educational resources within regions, allocate high-quality educational resources rationally, and use new technologies to improve the overall efficiency and quality of educational resource utilization.^[1]

1.2 Current utilization of educational resources

Qingdao has demonstrated its active exploration and practice in the modernization of education and the promotion of educational equity in terms of the current utilization of educational resources. Through the construction of digital transformation empowerment centers for key industries, Qingdao has provided support to small and medium-sized enterprises (SMEs) and educational institutions in various aspects, including digital diagnostic consulting services, transformational ecological products, and industry solutions. This has not only promoted the modern utilization of educational resources but also helped SMEs overcome the threshold of digital transformation, thereby improving the efficiency of educational resource utilization and the quality of educational services. At the same time, by building scenario application laboratories, Qingdao has further promoted innovation in educational technology and models. These labs focus on the practical needs of startups at the micro-level of innovative development, not only pushing the validation and application of business outcomes but also offering new ideas for the optimal allocation and efficient utilization of educational resources. Particularly, through the establishment of the nation's first scene-specific investment fund "Scene Fund," more enterprises have been given opportunities for breakthrough development, promoting technological innovation and practical application in the education sector. These measures not only showcase Qingdao's advanced practices in the utilization of educational resources but also reflect its efforts to promote educational equity and the balanced distribution of educational resources. Through digital transformation and technological innovation, Qingdao has achieved a transition of educational resources from traditional to modern, not only enhancing the efficiency of utilization but also providing students with more and better educational opportunities. This serves as a valuable reference and inspiration for other cities in terms of educational resource utilization and modernization.^[2]

2. Major issues facing the equalization of educational resources in Qingdao

2.1 Uneven distribution of urban and rural educational resources

The Gap in Educational Infrastructure: Urban schools are typically equipped with advanced multimedia classrooms, scientific laboratories, and spacious sports facilities, providing students with a rich and diverse learning environment and opportunities for practice. In contrast, students in rural schools face issues such as cramped classrooms, outdated equipment, and a lack of experimental and sports facilities, which not only limits the diversity of teaching methods but also affects the cultivation of students' comprehensive qualities.

Uneven Distribution of Teaching Staff: Urban schools can attract teachers with high academic qualifications and rich experience, who are often able to employ modern teaching methods to meet the diverse learning needs of students. Conversely, in rural schools, the proportion of young and highly educated teachers is lower, and there are limited opportunities for professional development of teachers, leading to relatively traditional teaching methods that struggle to meet the demands of current educational reforms.

Inequality in Educational Investment: Urban areas, due to their higher level of economic development, can increase educational funding through local finances and social donations to improve the educational environment and quality. Rural areas, limited by economic conditions and even with government educational subsidies, struggle to reach the same level of

educational resources as urban schools, further widening the regional disparities in educational services.^[3]

Differences in Educational Programs and Extracurricular Activities: Students in urban schools have the opportunity to participate in various international exchange programs, scientific research activities, and cultural and artistic exhibitions. These activities not only enrich their extracurricular life but also enhance their innovative capabilities and global perspectives. In contrast, rural students, due to remote locations and lack of resources, often lack the opportunity to participate in these activities, which to some extent limits the development of their personal interests and the enhancement of their social competitiveness.

2.2 Inter-regional differences in educational resources

The disparity in educational resources among different regions within Qingdao is one of the main issues facing the equalization of educational resources. This disparity is not only evident between different urban areas but also includes the distribution of educational resources between urban areas and surrounding rural regions. Some regions, due to higher levels of economic development and advantageous geographical locations, can attract more educational resources, including high-quality teaching staff, advanced teaching facilities, and substantial educational investments. In contrast, regions that are economically less developed or geographically remote tend to have relatively scarce educational resources, directly affecting students' learning conditions and the quality of education, thereby exacerbating the phenomenon of educational inequality. Moreover, the difference in educational resources between regions can lead to increased student mobility, with parents moving to areas with richer resources in order for their children to receive a better education. This not only increases the economic burden on families but also impacts the educational and community environment of their original place of residence. Therefore, addressing the disparities in educational resources between regions is one of the significant challenges to achieving the equalization of educational resources.

2.3 Scarcity of high-quality educational resources

The scarcity of high-quality educational resources is particularly evident in suburban areas, stemming from complex and multidimensional causes that affect the educational opportunities and quality for students in these regions. The disparity in educational resources between urban and suburban areas, especially in terms of teaching staff, educational facilities, research conditions, and learning environments, exacerbates regional educational inequality. In terms of teaching staff, high-quality teacher resources tend to be concentrated in key urban schools, while suburban schools often face a situation where the quality of teachers varies greatly, directly impacting students' learning outcomes and developmental potential. Additionally, compared to urban schools, suburban schools generally lag in educational facilities and research conditions, lacking advanced laboratories and rich library resources, which limits students' ability to explore knowledge and engage in research activities. Furthermore, a positive and uplifting learning environment is crucial for students' growth; however, due to uneven resource distribution, many students in suburban areas are unable to enjoy such environments, affecting their learning motivation and mental health. This significant gap in high-quality educational resources between urban and suburban areas not only deepens the injustice in regional education but also hinders overall societal progress. The unequal distribution of educational resources, especially the scarcity of high-quality resources in suburban areas, requires the joint efforts of policy support and social forces to address, with the aim of achieving educational equity and promoting the comprehensive development of every student.^[4]

3. Countermeasure research for the equalization of educational resources in Qingdao

3.1 Optimizing the allocation strategy of educational resources

3.1.1 Increasing education investment

The government should increase its financial investment in education, especially by supporting remote, impoverished, and suburban schools, to narrow the gap in educational resources with schools in the urban core areas. This includes not only the construction and improvement of infrastructure, such as school buildings and laboratory equipment updates but

also increases in teacher training and student scholarships and grants, thus providing students with better educational conditions.

3.1.2 Optimizing resource distribution mechanism

Establishing and improve the dynamic adjustment mechanism of educational resources to ensure the fairness and effectiveness of resource allocation. This includes implementing educational resource sharing programs, such as establishing mechanisms for sharing teachers, textbooks, and teaching facilities among schools within a region; promoting the online sharing of high-quality educational resources, using modern information technology to open up high-quality educational resources to schools in less developed areas through online platforms, and narrowing the geographical disparities in educational resources.

3.1.3 Implementing education equity policies

Developing and implementing education equity policies for all students, especially providing more educational opportunities and support for students from economically disadvantaged families. For example, by implementing fairer student admission policies to ensure equal enrollment opportunities for all types of students; providing tuition waivers, living allowances, and other measures for low-income family students to ensure they can complete their studies successfully.

3.1.4 Strengthening the construction of teaching staff

High-quality teaching staff is key to improving education quality. The government and education departments should increase investment in teacher training to enhance teachers' professional levels and teaching abilities. At the same time, by formulating preferential policies to attract excellent teachers to teach in remote and impoverished areas, the teaching quality in these areas can be improved.

3.2 Improving the efficiency of educational resource utilization

In the process of equalizing educational resources, the application of modern information technology in the field of education can greatly expand the coverage and efficiency of educational resources. By establishing a comprehensive online education platform, the widespread sharing of high-quality educational resources can be promoted, allowing students in both urban centers and remote suburban areas to access first-rate teaching content and methods. These platforms should include not only live online courses and remote teaching but also a rich digital resource library containing electronic textbooks, interactive courseware, and simulations, which can be updated and optimized according to teaching needs at any time. Moreover, modern information technology can also support professional development and exchange among teachers, allowing them to share teaching experiences and discuss educational innovation across regions through webinars and online workshops.

Furthermore, advancing cooperation and resource sharing between schools is equally crucial for improving the efficiency of educational resource utilization. Establishing regional educational alliances or cooperation networks to promote resource sharing and mutual assistance among schools can enhance this effort. Such cooperation should not be limited to traditional teaching resources but should also include teacher exchanges, joint research projects, and student exchange activities. Specifically, the promotion of the dual-teacher teaching model, which combines online and offline resources through the collaboration of dual teacher teams, can both improve teaching efficiency and stimulate students' interest in learning. In addition, inter-school exchange programs, such as student visits and short-term teacher exchanges, can not only foster understanding and trust between schools but also enrich students' learning experiences and promote comprehensive development. Implementing these measures can not only maximize the efficiency of existing educational resources but also promote educational equity, providing all students with richer and higher quality educational opportunities^[5]

By deeply leveraging modern information technology and actively promoting cooperation and sharing between schools, Qingdao can improve the efficiency of educational resource utilization while achieving equitable distribution of

educational resources. This requires the joint efforts and sustained investment of governments, educational institutions, and all sectors of society to ensure that every student can enjoy high-quality education, laying a solid foundation for their future development.

3.3 Measures to promote educational equity

The focus of promoting educational equity in Qingdao lies in strengthening the construction of schools in rural and remote areas and providing diverse educational support services. These two aspects are key to achieving the equalization of educational resources. First, the construction of schools in rural and remote areas should not only focus on improving infrastructure, such as modern classrooms, laboratories, sports facilities, and libraries, but should also include the updating of teaching methods and content, as well as the continuous training of teachers' professional skills. This means that more financial and human resources must be invested to ensure that these schools can offer education of the same quality as urban schools. Additionally, by introducing advanced information technology, such as remote education platforms and digital learning resources, Qingdao can effectively break through geographical limitations, allowing students in remote areas to also have access to high-quality educational resources. The application of this technology not only improves the coverage and efficiency of educational resources but also provides strong support for achieving the goal of educational equity. At the same time, Qingdao must provide diverse educational support services to meet the personalized needs of students from different backgrounds. This includes providing students with tutoring and psychological health support to ensure they receive adequate attention and help both academically and emotionally. For students with special educational needs, specialized educational resources should be provided, including adapted learning plans, professional teacher support, and necessary physical facilities, to ensure these students can also enjoy fair and high-quality education. Additionally, for students from economically disadvantaged backgrounds, Qingdao should implement financial aid programs, such as scholarships and grants, to alleviate their financial burden and enable them to complete their studies smoothly. The implementation of these measures requires close cooperation and continuous attention from the government, schools, and all sectors of society. Through such joint efforts, Qingdao will be able to make significant progress in promoting educational equity, providing a solid educational foundation for the city's sustainable development.

4. Conclusion

This paper has delved into the current state of educational resource distribution in Qingdao and the challenges it faces, proposing a series of practical and feasible countermeasures. As a coastal city with a higher level of economic development, the issue of unequal distribution of educational resources in Qingdao is not limited to urban-rural disparities but also includes gaps within regions and between urban and suburban areas. Through increasing education investment, optimizing resource distribution mechanisms, implementing education equity policies, and promoting inter-school cooperation and resource sharing, Qingdao can effectively promote the equalization of educational resources, improve education quality, and thereby achieve educational equity and foster comprehensive societal development.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- [1] Hao Jie, Wang Huanli, Research on the Equalization of Public Education Services in Qingdao[J], *SME Management and Technology*. 2016; (17): 55-56.
- [2] Dong Weixin. Problems and Countermeasures in the Construction of High-Quality Educational Resources in Communities[J], *Journal of Henan Radio & TV University*. 2018; (04): 5-8.
- [3] Dong Wei, Zheng Yingying, Hu Gaomin. Research on the Factors Affecting the Co-construction and Sharing of Digital Resources in Basic Education and Development Strategies[J], *Basic Education*. 2023; 20(01): 89-97+110.
- [4] Chen Mingxuan, Lai Zhiling, Cai Huiying. Digital Resources and Services in China's Basic Education: Current Situation, Problems, and Countermeasures[J], *China Distance Education*. 2022; (06): 11-20+76.

[5] Zang Fangqing. Model and Practice of Creating 'Smart Education Demonstration Zone' in Qingdao[J], China Educational Technology. 2023; 29(03): 68-73.

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