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Strategies for Promoting Regional Smart Education

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Abstract: Owing to the continuous advancement of information technology, smart education has become a new direction for educational development. Through investigation, it was found that there is an imbalanced education development in some regions. To promote the integration of urban and rural education, promoting regional smart education as a whole will be the key to solving this problem. Based on this direction, this study focused on explaining the concept and characteristics of smart education, the value and significance of regional smart education, the problems and challenges of regional smart education, and strategies and measures to promote the development of regional smart education. This is significant to form a universal regional smart education promotion strategy and provide reference for the overall promotion of smart education.

Keywords: Regional issues; Smart education; Promotion strategy

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1. Introduction

Owing to the popularization and development of information technology, smart education has become a crucial direction in the current progress of education. Regional smart education aims to promote innovation and reform in education and improve the quality of education by integrating various resources [1]. With the support of new technologies, the "Smart Education Action Plan" can promote education and teaching reform, and regard smart education as a new field and development direction. To promote the progress of smart education in the region, the Ministry of Education released the "Education Informatization 2.0 Action Plan" in April 2018, and proposed specific requirements for implementing this strategy. In the 2.0 era, it is essential to build a networked, digital, intelligent, personalized, and lifelong education system, to build a learning society where everyone can learn everywhere at all times. In this way, goals that are more open, suitable, and people-oriented can be achieved, making education fairer and more sustainable [2]. In the future, China's education development will be centered around the modernization process of education with a "people-oriented" approach. Without the support and guidance of "human quality," China's education modernization will not be able to achieve "comprehensive

human development." Thus, we need to pay more attention to serving the development of equality and high-quality education [3].

2. Concept and characteristics of smart education

Smart education, also known as educational informatization, refers to the comprehensive and in-depth application of modern information technology in the field of education (educational management, teaching, and research) to promote educational reform and development. Its technical characteristics are digitization, networking, intelligence, and multimedia, with its basic features being open, accessible, interactive, collaborative, and ubiquitous. It can promote educational modernization through informatization and transform traditional models with information technology [4]. To better understand smart education, it is necessary to look at it from two aspects.

From the perspective of educational function orientation and national talent cultivation strategy, smart education is recognized as an education oriented towards the enlightenment of human wisdom. It is a fundamental issue regarding the quality of talent cultivation and human development. Throughout the history of society and education, the kind of people we want to cultivate is closely related to the stage of social development [5]. The basic principle of cultivating innovative talents is to use high-quality education to promote the comprehensive progress of intellectual and non-intellectual factors. From this perspective, smart education can be considered as an education oriented towards a smart society [6].

It is important to optimize, enhance, and restructure the various factors that make up education to meet the needs of intelligent society for talent cultivation, and thus establish a new and higher-level education system. Education must be guided by the development of human intelligence. Smart education requires innovation in the following two aspects of education [7].

To fully utilize new information technology and educational products, and achieve smart education, education should not only be oriented towards the intelligent society, but also rooted in it. New information technologies such as big data, virtual reality, artificial intelligence, and blockchain are accelerating the innovative progress of the digital economy. During digital industrialization and industrial digitalization, the development of digital service industry has also been rapid. We need to implement the national education digitization strategy by placing education in a networked, digital, and intelligent environment that integrates virtual and real elements, which include digital education resources and tools [8].

It is essential to build a modern education system and achieve smart education. The types of education included are basic education, vocational education, higher education, and adult education [9]. The current education service system composed of social education, family education, etc., can no longer meet the needs of individualized and lifelong education. Therefore, we need to promote the upgrading of network services in the current education system, build a new physical and virtual education service system. Subsequently, a "data-driven" education management system construction method can be proposed based on the new system [10].

3. Value and significance of promoting regional smart education

The research on promoting strategies for regional smart education has three main application values:

The first value is providing guidance for the development of regional smart education. At present, the construction of smart education is still in its infancy, and the relevant concepts and goals are still in the exploratory stage. It is particularly necessary to clarify what smart education is and how to build it, so it is essential to have a realistic foundation, optimal top-level management, and development planning. This study

will play a guiding role in the progress of regional smart education [11].

Secondly, it provides reference for the development of other regions. A comprehensive study of the development strategy of regional smart education provides new information technology and useful reference for the development of local education. On this basis, it explores how to reasonably allocate resources in the process of smart education, pointing out the path for future development [12].

The last value is promoting the reform and progress of education itself. Smart education is another breakthrough and development in educational informatization. It is a crucial way to use new technologies to promote educational development, and also a combination of education itself and modern social progress. Through the construction of smart education, we can continuously improve the quality of education, deeply promote the transformation of education models, comprehensively achieve equity in education, and truly create "high-quality and fair education" [13].

4. Current situation and challenges of regional smart education

4.1. Regional development differences in smart education

Through our investigation, it was found that there are significant differences in the development of smart education in primary and secondary schools among different regions [14]. Some prestigious schools with "smart campuses" have been well-developed. However, most primary and secondary schools are still in their early stages. In terms of smart education infrastructure, the main focus has been on the construction of information technology equipment [15]. However, there are still problems such as limited interaction and application, and targeted teaching resources that cannot meet the needs [16].

4.2. Teachers' insufficient understanding of smart education and use of technology

Some schools have relatively complete infrastructure, but their resources are idle. The main reason for this is that teachers are still holding on to traditional educational concepts, which makes them unwilling to change their teaching methods. In addition, teachers are too busy with their work, and they lack the time and energy to learn new educational technologies or explore the teaching applications of smart classrooms [6].

4.3. Slow development of smart classrooms

Some primary and secondary schools find it difficult to accept the new intelligent teaching system due to the constraints of existing teaching concepts. In the initial stage, this new teaching and management method has had an impact on traditional teaching models, causing certain pressure and burden on teachers. Students also lack the support of corresponding mobile devices, and there is little research on the in-depth development and application of smart classrooms. Consequently, schools are unable to sustainably apply them, resulting in slow progress of smart classrooms [17].

5. Strategies and measures to promote the development of regional smart education

5.1. Optimizing top-level management

It is essential to promote smart education and smart classrooms, with a focus on strengthening the construction of top-level policies. For example, the Education Bureau can start by improving the hardware of smart classrooms and introduce corresponding policy support, then gradually expand from three levels: city, county, and town. It is necessary to fully leverage government resources, strengthen the collaboration between

government and enterprises, accelerate the construction of the core support system for educational cloud computing, achieve a combination of top-level management and grassroots innovation, and reasonably utilize and integrate existing platform resources, so as to build a new ecosystem for the development of smart education [18].

5.2. Improving the evaluation system and encourage teachers to actively participate

Currently, the evaluation system for smart education or smart classroom applications is relatively incomplete. Without necessary incentives, teachers will not have the motivation for reform and innovation, nor will they achieve the goals of smart classrooms, thereby affecting the overall development of smart education.

5.3. Increasing funding investment to stimulate the vitality of smart education

It is crucial to emphasize the infrastructure of smart classrooms. The education department needs to increase investment, supply the software and hardware required for smart education, integrate and optimize school-based education resources, and enable teachers to better utilize the infrastructure [19].

5.4. Building school-based resources

Given the abundance of existing teaching platforms and resources, primary and secondary schools need to build school-based resources for lesson preparation in various disciplines to address the shortage of platform resources.

5.5. Strengthening collaboration in online teaching and research

Drawing from existing models and experiences, it is crucial to actively promote integration of online and offline teaching and research, and promote primary and secondary school teachers to better design and research smart classroom teaching.

6. Conclusion

To further promote the development of regional smart education, it is crucial to take policy as the leading factor, and build a normalized development mechanism for smart education. It is important to optimize and integrate existing platform resources. The government should also increase investment in software and hardware required for smart classrooms. The corresponding evaluation and reward mechanisms should also be established and improved. The collaboration among local education departments, primary and secondary schools, and enterprises should be improved. The advantages of government enterprise collaboration should be leveraged, so as to jointly promote the development of regional smart education.

Disclosure statement

The author declares no conflicts of interest.

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