

SWOT Analysis of Artificial Intelligence Enabling Rural Teacher Team Building in Context of Rural Revitalization

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Abstract: Rural revitalization lies in the revitalization of rural education, and the revitalization of rural education lies in the construction of rural teachers. Artificial intelligence empowers the construction of rural teachers, which is an inevitable initiative to comply with China's rural revitalization strategy. Through SWOT analysis, the advantages, disadvantages, opportunities and threats of AI-enabled rural teacher team building are comprehensively analyzed, in order to achieve the "strengths" to avoid "weaknesses", grasp the opportunities, meet the threats, and put forward the following countermeasures to promote the construction of AI-enabled rural teacher team. It also proposes countermeasures to promote the sustainable and healthy development of rural teachers' team construction.

Keywords: rural revitalization, artificial intelligence, empowerment, rural teachers team building, SWOT analysis

1. Introduction

When revitalizing rural areas, education becomes a top priority. Revitalizing education with a focus on teachers is crucial. Building an AI-enabled rural teacher team is an essential part of rural revitalization. The promotion of linking artificial intelligence and rural teacher training is a critical step toward achieving digital countryside and digital education goals, as well as a necessary solution to overcome the challenges of rural education development and address the challenges faced by rural teachers.

1.1. Multiple Initiatives to Boost Coupling

General Secretary Xi Jinping emphasized: "China attaches great importance to the profound impact of artificial intelligence on education, and actively promotes the deep integration of artificial intelligence and education." China advocates the need to fully utilize the boosting role of new technologies such as artificial intelligence to serve the development of rural teachers, and proposes that teachers should take the initiative to adapt to new technological changes such as informationization and artificial intelligence, and actively and effectively carry out education and teaching.

1.2. New Breakthroughs in Science and Technology to Realize Coupling

We are in the fourth industrial revolution, we should make good use of the “east wind” of artificial intelligence to promote and realize the new development of rural education and rural teachers in the future, and to promote the new horizontal and vertical development of rural teacher team building. We need to conduct serious research, scientific studies and judgments, help artificial intelligence to empower the construction of rural teachers, innovate intelligent rural education service system, and help rural revitalization.

1.3. Digital Rural Education to Promote Coupling

The future society is an intelligent society, and the intelligent era provides new ideas for the construction of China’s rural teacher team and reshapes the new rural intelligent teacher team. As the implementation body of rural education work, rural teachers need to improve their own intelligent literacy, realize the deep coupling of artificial intelligence and education, and give full play to the role of intelligent tools in the process of improving the quality of teachers and perfecting their skills.

2. SWOT Analysis

2.1. Strengths

2.1.1. Providing Technical Support

China’s artificial intelligence is in a leading position in the world, bringing opportunities for the development of rural education in China and providing a new paradigm for solving the problem of educational equity in China. China’s artificial intelligence empowers the development of rural education [1], strengthens the foundation for the digitalization of rural education, and also promotes the digital development of rural teachers.

2.1.2. Enhancing Work Efficiency

The technological advantage of artificial intelligence as a digital tool can help teachers break the limitations imposed by time and space on the distribution of educational resources, and realize the high-speed and efficient sharing and circulation of educational resources in the technological field. Artificial intelligence makes “mobile” learning a reality, assisting rural teachers to better complete their teaching work and allowing students to receive timely feedback.

2.1.3. Reshaping the Role of Teachers

Regardless of the development of science and technology, education has always been an interaction of views and thinking between people. The nurturing mission of rural teachers has gradually evolved from the traditional task of instilling and imparting knowledge to cultivating and guiding students’ thinking skills, establishing the correct three views, transmitting the correct concepts of the three rural areas, and helping students to become successful.

2.1.4. Optimizing Teaching Format

The intelligent era has brought great changes to the work of education, and new forms of teaching, such as human-computer interaction and autonomous deep learning, are gradually spreading, creating a new kind of educational ecological chain. The embedding of intelligent technology makes the paradigm of teaching realize upgrading, and the elements of teaching realize reintegration, enhance the interactivity of the two subjects of teaching, and enhance the immersion experience.

2.2. Weaknesses

2.2.1. Inadequate Stock of Smart Skills

The current rural teachers have grown up in the traditional teacher cultivation system, and the cultivation and training of intelligent skills in China's traditional teacher cultivation system is insufficient, making it difficult to meet the requirements of the future teaching tasks of intelligent teachers, the new requirements put forward by the future development of education work, and the needs of the future talent cultivation program.

2.2.2. Subversion of Traditional Work Patterns

The future education model enhances the flexibility of teaching and learning, and the teaching mode realizes disruptive development. Rural teachers need to think about how to guide intelligent technology to serve education and rural revitalization, and promote the digital transformation of rural education.

2.2.3. Unbalanced Allocation of Smart Resources

There is an imbalance in the distribution of teachers and educational resources between urban and rural areas, and the difference is very obvious, which needs to attract our great attention. Insufficient distribution of intelligent resources in rural areas is also a focus of attention in the process of promoting intelligent education in the future.

2.3. Opportunities

2.3.1. Realistic Needs in the Post Epidemic Era

Against the backdrop of the improving epidemic dynamics, no one should take it lightly and need to be more vigilant. We can not ignore the huge impact of the new crown epidemic to the work of education, the post-epidemic era of higher requirements for online teaching, artificial empowerment of teacher development, but also to the future development of rural education work and the construction of the teaching force to provide a new way of thinking.

2.3.2. Tilted Support of Policies

China has emphasized "promoting the digitization of education" and "realizing the deepening integration and application of artificial intelligence in education and teaching", advocating that teacher groups "take the initiative in adapting to changes in information technology, artificial intelligence and other new technologies" [2], and exploring new modes of adapting to the construction of rural teacher teams.

2.4. Threats

2.4.1. High Equipment Requirements

Artificial intelligence relies on information technology, networks, hardware and other facilities, which places higher demands on rural educational resources. Rural areas not only lack teachers, but also lack resources and equipment [3]. This status quo also needs the state to give policy inclination, financial supplements, but also needs more social forces to inject, to provide support for AI-enabled rural team building.

2.4.2. Rapid Technology Iteration

Information technology is “changing rapidly”, and rural education is realizing the transformation to digital education and intelligent education, which puts high demands on rural teachers to adapt to the changes in information technology, and the Outline of the Strategy for the Development of Digital Rural Areas puts forward the idea of “deeply promoting the formalization of rural education”. “. The contradiction between one-time investment and continuous iteration of rural intelligent equipment should not be ignored.

2.4.3. High AI Literacy Requirements

Artificial intelligence technology belongs to one of the latest technologies in today’s society, to be used in the development of rural education and the construction of rural teachers, which requires rural teachers to have a high degree of information literacy, and to be able to master the technology of artificial intelligence in a timely and effective manner, so that they can better play the role of assistive technology of artificial intelligence.

2.4.4. Crisis of AI Ethical Issues

Xi Jinping has emphasized the need to “strengthen research on AI-related ethical issues” [4]. Rural teachers need to abide by professional ethics, and in the process of using AI technology, they also need to abide by information technology ethics, set up a correct concept of intelligent ethics, pay attention to privacy protection, do a good job of ethical review, and keep a good moral bottom line, so as to realize the service of AI technology for education, for students, for the development of teachers, and for the revitalization of the countryside.

3. Empowerment Pathway Study

3.1. Intelligent Teacher Training, Building Online Training

At present, there is a widespread structural shortage of rural teachers in China [5], and the construction of an artificial intelligence-enabled online training platform can effectively solve this problem. Artificial intelligence + education expands the breadth and depth of training, incorporates intelligent technology into the training content system of rural teachers, and internalizes it into the working skills that rural teachers must master. Artificial intelligence to assist the full coverage of master teacher exchanges, master teachers and ordinary teachers to achieve online “hand in hand”, rural teachers can be combined with their own reality, to achieve a “personalized customized” growth program, in the form of online selection of the content of the training and training time, through the Artificial intelligence empowers rural teachers to make a breakthrough in self-growth.

3.2. Intelligent Education and Teaching Work, Teaching Quality Upgrading

The integration of artificial intelligence technology and education teaching technology promotes the updating and upgrading of rural teachers’ education teaching work, promotes the “change of track” of education teaching work, and optimizes and upgrades the teaching mode. In the aspect of “teaching”, it facilitates the educational work of teachers, provides teachers with rich teaching resources and teaching platforms, assists teachers to do a good job in education, and realizes the upgrading and upgrading of the educational function; in the aspect of “learning”, it provides more paths for rural students to learn, and can realize more efficient feedback. In terms of “learning”, it provides more paths for rural students to learn, enables efficient feedback, assists in the development of personalized learning programs, and improves the relevance of learning. Artificial intelligence can

help facilitate the effective integration of “high-quality content”, “high-quality form” and “high-quality technology” in rural education, and improve the intelligent teaching ability of rural teachers.

3.3. Intelligent Online In-depth Learning, Comprehensive Development of Literacy

Artificial intelligence technology can provide teachers with online in-depth learning resources and platforms to support the personalized development of rural teachers, rich online resources, breaking through the limitations of time and space. Rural teachers’ mastery of intelligent skills can effectively improve their own digital quality. On the basis of intelligent technology support, the online master teacher studio and master teacher classroom can effectively realize the sharing of high-quality teaching resources, learning effectiveness has been accurately improved, help rural teachers improve their professionalism, and is more conducive to the implementation of the lifelong learning system of rural education, breeding rural educators with intelligent literacy, and helping the revitalization of the digital countryside.

3.4. Intelligent Teacher Evaluation Reform, Teacher Evaluation Improvement

In line with the trend of intelligent development, we can rely on artificial intelligence technology, change the content and form of traditional rural teacher evaluation, establish and improve the new intelligent teacher evaluation system [1], reform the means and process of teacher evaluation, realize the smoothness of the “last kilometer” of the road of teacher growth, relying on numbers and algorithms. Establishing teachers’ electronic files, realizing instant and comprehensive collection of data on teachers’ teaching work process, in-depth excavation of information, inductive statistical analysis, and comprehensive inference, and gradually realizing the digitization and precision of teachers’ evaluation and management.

3.5. Intelligent Local Sentiment Precipitation, Local Rooted Development

Let artificial intelligence “more power”, so that rural teachers “less running”, effectively reducing pressure for rural teachers. Under the assistance of artificial intelligence, rural teachers can precipitate themselves, realize effective growth, focus on research and study school-based rural teaching materials, digging deep into the local cultural elements, local elements, teaching system, rural development of the three organic coupling, the formation of a long-term operating mechanism, the personal development of the “I” and rural development of the “big I” and the “big I”. The “small self” of personal development and the “big self” of rural development are deeply coupled, which effectively helps rural teachers to realize the dream of rural educators, find their spiritual belonging and take root in the countryside.

4. Conclusions

The participation of artificial intelligence in the construction of rural teachers can alleviate the difficulties of teachers’ future development and optimize the growth path for the construction of rural teachers.

In the wave of digitization, we need to rationally deal with the relationship between human beings and artificial intelligence. First of all, artificial intelligence as a technical means, it serves in education, can be used as an auxiliary role in education, to help do a good job in education and teaching, to do a good job of teaching and solving the problem; secondly, people are the main body of the education work, should improve their own information literacy, master the intelligent technology, and the rational use of AI technology in teaching, to realize the development of AI-empowered education, and the construction of the rural teacher team. The road of artificial intelligence “empowerment”

should be combined with China's national conditions, combined with the "village conditions" of the Chinese countryside, combined with the "teacher's conditions" of the rural teachers to realize the localization of artificial intelligence and the ruralization of artificial intelligence, to meet the needs of rural teachers. Ruralization, to meet the needs of the future development of rural teachers and to meet the challenges brought by the road of rural revitalization.

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