ประสิทธิภาพของปัญญาประดิษฐ์สำหรับการจัดการการศึกษา ในมหาวิทยาลัยสังกัดมณฑลเหลียวหนิง

EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE FOR EDUCATIONAL MANAGEMENT IN UNIVERSITIES UNDER LIAONING PROVINCE

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ (1) ศึกษาองค์ประกอบของประสิทธิผลของปัญญาประดิษฐ์เพื่อการบริหารจัดการการศึกษาในมหาวิทยาลัยภายใต้มณฑลเหลียวหนิง และ (2) เสนอแนวทางการบริหารจัดการเพื่อส่งเสริมประสิทธิผลของปัญญาประดิษฐ์เพื่อการบริหารจัดการการศึกษาในมหาวิทยาลัยภายใต้มณฑลเหลียวหนิง สาธารณรัฐประชาชนจีน

การวิจัยครั้งนี้เป็นการวิจัยแบบผสมผสานระหว่างการวิจัยเชิงคุณภาพและการวิจัยเชิงปริมาณ ประชากร ได้แก่ ผู้บริหาร ศาสตราจารย์ และอาจารย์ผู้สอนด้านการบริหารจัดการการศึกษาด้วยปัญญาประดิษฐ์ในมหาวิทยาลัยภายใต้มณฑลเหลียวหนิง สาธารณรัฐประชาชนจีน จำนวน 2,867 คน กำหนดขนาดกลุ่มตัวอย่างโดยใช้ตารางของ Krejcie และ Morgan (1970) ได้กลุ่มตัวอย่างจำนวน 395 คน โดยใช้วิธีการสุ่มตัวอย่างแบบแบ่งชั้นภูมิ ส่วนผู้ให้ข้อมูลสำคัญ ได้แก่ อาจารย์ผู้สอน รองศาสตราจารย์ ศาสตราจารย์ และผู้บริหาร ซึ่งคัดเลือกด้วยวิธีการเลือกแบบเจาะจง เครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูล ได้แก่ แบบสัมภาษณ์กึ่งโครงสร้าง แบบสอบถามมาตรประมาณค่า 5 ระดับ และแบบบันทึกการสนทนากลุ่ม สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ความถี่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน การวิเคราะห์องค์ประกอบเชิงสำรวจ และการวิเคราะห์เนื้อหา

ผลการวิจัยพบว่า (1) องค์ประกอบของประสิทธิผลของปัญญาประดิษฐ์เพื่อการบริหารจัดการการศึกษาในมหาวิทยาลัยภายใต้มณฑลเหลียวหนิง ประกอบด้วย 8 องค์ประกอบ ได้แก่ 1) ประสิทธิภาพการบริหารจัดการการประยุกต์ใช้ปัญญาประดิษฐ์ 2) ประสิทธิภาพการเพิ่มประสิทธิภาพและ

การประเมินผลการบริหารจัดการ 3) การเพิ่มประสิทธิภาพระบบและการพัฒนาบุคลากร 4) การขับเคลื่อนด้วยเทคโนโลยีและนวัตกรรมทางการศึกษา 5) การสร้างระบบการบริหารจัดการ 6) การประเมินความเสี่ยงด้านการศึกษาดิจิทัล 7) การบริหารจัดการนักศึกษาและบุคลากร และ 8) ความเสมอภาคทางการศึกษาและการยกระดับคุณภาพการศึกษา และ (2) แนวทางการบริหารจัดการเพื่อส่งเสริมประสิทธิผลของปัญญาประดิษฐ์เพื่อการบริหารจัดการการศึกษาในมหาวิทยาลัยภายใต้มณฑลเหลียวหนิง มีจำนวนทั้งสิ้น 23 แนวทาง

คำสำคัญ: ประสิทธิผล, ปัญญาประดิษฐ์เพื่อการบริหารจัดการการศึกษา, มณฑลเหลียวหนิง

Abstract

The objectives of this research were: (1) to examine the components of effectiveness of Artificial Intelligence for educational management in universities under Liaoning Province; and (2) to propose the managerial guidelines of effectiveness of Artificial Intelligence for educational management in universities under Liaoning Province.

The research was a mixed qualitative research and quantitative research. Population was administrators, professors, instructors of artificial intelligence educational management in universities under Liaoning Province, the People's Republic of China, totalling 2867 . The sample size was determined by Krejcie and Morgan's Table (1970), obtained by stratified random sampling method, totalling 395. The key informants were instructors, associate professors, professors, and administrators, obtained by purposive sampling method. The instruments used for data collection were semi-structured interview form, five-point rating scale questionnaire, and Focus Group Discussion Form. The statistics used for data analysis were frequency, percentage, mean, Standard Deviation, Exploratory Factor Analysis and content analysis.The research findings were revealed that; (1) there were eight components which were application management performance,management optimization and evaluation management performance,system optimization and talent development,technology-driven and educational innovation ,management system construction,digital education risk assessment,student and staff management,educational equity and quality improvement;and (2) there were twenty three managerial guidelines of effectiveness of artificial intelligence for educational management in universities under Liaoning Provinces.

Keywords: Effectiveness, Artificial Intelligence Educational Management, Liaoning Province

1. RESEARCH PROBLEM'S SIGNIFICANCE

Entering the 21st century, the high concentration of Internet applications and the rapid development of artificial intelligence mark the beginning of the information revolution with big data as the core. Big data and artificial intelligence are deeply affecting various fields, especially education. Since the concept of artificial intelligence was proposed at a Dartmouth University seminar in 1956, it has undergone significant technological progress from "Deep Blue" to "Alpha Go" to "Alpha Fold", promoting data-driven changes. Education, as one of the most important scenarios for the application of artificial intelligence, has great potential. In China, with the advancement of informatization, artificial intelligence education has been valued in national policies, and the Ministry of Education has also issued a series of supporting policies, such as the "Education Informatization 2.0 Action Plan" and the "China Education Modernization 2035" plan, to promote the deep integration of education and artificial intelligence (Liu Shiqing, 2021). However, the application of artificial intelligence in education also faces risks such as privacy, fairness, and discrimination, especially the digital divide in the development of educational informatization. The digital divide is not only reflected in the gap in hardware and technical facilities, but also involves the imbalance of educational resources and opportunities. The educational management of artificial intelligence faces multiple challenges such as algorithmic bias, educational responsibility and quality management. It requires joint efforts of the government and educational institutions to ensure that technological development does not exacerbate educational inequality (Zheng Yafeng, 2020). Liaoning Province has made positive progress in promoting the educational management of artificial intelligence. By deepening the integration of industry and education and improving the information literacy of teachers and students, it has gradually bridged the digital divide in educational development. However, it still needs to further strengthen industrial cooperation, curriculum flexibility and practical links to cultivate talents that better meet the needs of the industry and promote scientific and technological innovation and economic development.

2. RESEARCH OBJECTIVES

1. To examine the components of effectiveness for artificial intelligence educational management in universities under Liaoning Province.

2. To propose the managerial guidelines for effectiveness of artificial intelligence educational management in universities under Liaoning Province.

3. RESEARCH SCOPE

3.1 Scope of population

The population is 2,867, including instructors, associate professors, professors, and administrators participating in the management of artificial intelligence in Liaoning Province. The researcher used simple random sampling and stratified random sampling methods for selection. EFA conducted a questionnaire survey on a sample size of 395 respondents from 6 universities in Liaoning Province.

3.2 Scope of content to Study

Effectiveness

1. Effective management theory
2. Effectiveness of education management

Artificial intelligence

1. Key technologies of artificial intelligence
2. Risks of artificial intelligence

Education management concept theory

1. Human comprehensive development theory
2. Leadership theory
3. Postmodern teaching theory effectiveness

3.3 Scope of time

The time of the research would be an academic year 2024.

4. LITERATURE REVIEW AND CONCEPT

As Marvin Minsky, the founder of the artificial intelligence framework theory, pointed out, emotional machines will be the ultimate form of artificial intelligence development. By explaining the working process of the human brain, we can design machines with thinking, and then apply this thinking to the field of artificial intelligence, which also helps to understand the laws of human development. From the summary of historical experience, we can draw a conclusion: to cope with the work revolution, we need to start the education revolution first. Every major change in human society has benefited from the emphasis and popularization of education. (Liu Shiqing, 2021, 11)

In 2023, Yang Zongkai and Wang Jun published a study on the transformative impact of generative artificial intelligence represented by ChatGPT on the field of education,

emphasizing that teachers should accelerate the development of high-level professional products with local characteristics, carry out in-depth research on human-computer collaboration, correctly grasp the integration of artificial intelligence and education, and lead the transformation of education structure and operation mechanism. In 2018, Wang Feiyue's research showed that artificial intelligence, especially through technologies such as big data, cloud computing, the Internet of Things, and augmented reality, can improve education management. By obtaining multi-source data such as teaching and education management, personalized services are provided for the entire teaching process. Liu Hao and Liu Xiaoxiao (2022) studied the role of artificial intelligence in basic education monitoring and decision-making, pointing out how big data can make education evaluation more accurate and decision-making more reasonable by transforming from a single evaluation method to multiple evaluation methods, and ultimately improve the accuracy of education policies and management.

One of the most important and anticipated scenarios for the application of artificial intelligence is education. Deng Linbi and Chen Ang (2019) believe that artificial intelligence education management driven by big data will become a mainstream trend. Through human-machine collaboration, school management will be more scientific and efficient, and educational institutions will be able to share and analyze data, thereby improving decision-making and management levels. Zhang Hui's (2019) research clearly explains how artificial intelligence and big data technologies can bring revolutionary changes to education management. AI algorithms can help extract hidden insights from massive data sets, improve the transparency, accuracy, and predictability of education management, and transform decision-making from experience-driven to data-driven.

Chinese universities have also carried out specific implementation of AI education management.In a 2015 study on using AI technology to analyze student performance, Ma Dan detailed how data mining and machine learning can predict student performance, identify students at risk, and provide school management with actionable insights to improve academic planning and student support. Li Zhongbin and Tu Manzhang pointed out in their 2018 study that AI-driven analysis can achieve automated matching of talents and positions, motivate teachers, and improve the education system over time.

Problems encountered in the specific implementation process, such as the application of artificial intelligence in education, still remain in the traditional education scene, Ramesh A,

Dhariwal P (2022), Arias-Pérez, J. and Huynh, T (2023), and Sutipitakwong, S, Jamsri, P (2020) studies, highlight how artificial intelligence can support educational innovation, improve administrative processes, enhance learning experience, and achieve more efficient data-driven education management. Although they also point out challenges such as trust in artificial intelligence tools, ethical issues, and the need to use artificial intelligence effectively to prevent over-reliance, they generally emphasize the important role of artificial intelligence in reshaping the education landscape.

Finally, research by Ahmed A A A, Ganapathy A (2021), Goralski M A, Tan T K (2020), and Jaladi S R, Doreswamy H, Uttam R (2024) discussed AI's increasing integration into educational entrepreneurship, online teaching systems, and curriculum management. Their studies stress that while AI offers immense potential to enhance teaching and learning, careful consideration of ethical standards, data privacy, and academic integrity is necessary to maximize its benefits while avoiding negative outcomes like plagiarism and data misuse. In summary, these studies collectively highlight the rapid advancements in artificial intelligence within education, underscoring its transformative potential in improving teaching, management, and decision-making while also acknowledging the challenges of data security, ethical concerns, and the need for human oversight in AI-driven processes.

5. RESEARCH METHOD

This study mainly adopts literature research method, survey research method, quantitative analysis method, etc. The research subjects are from 6 universities in Liaoning Province, and the total number of samples will be randomly sampled. The researcher determined the sample size of 395 samples by optimizing the design and empirical research method. A total of 395 samples were received, with a recovery rate of 100%.

The questionnaire uses the Likert-5 scale for measurement and judgment. After that, the questionnaire is modified according to the feedback of the respondents, and finally the formal survey research questionnaire is determined. The research questionnaire contains 87 measurement items.

The tool is developed into a questionnaire starting from step (1). Content validity and reliability are used to evaluate the quality of the questionnaire. For content validation, it is checked by 5 experts and analyzed by item-objective consistency (IOC). (2) These questions are sent by email to researchers. (3) Descriptive statistics, frequency and percentage are

used to analyze the data of demographic variables. After data collection, the collected data were analyzed using content analysis.

6. DATA ANALYSIS

6.1 Descriptive Statistics for the Sample

It was summarized that there were total of 395 respondents to the questionnaires; including 226 males, accounting for 57.2%, and 169 females, accounting for 42.8%. In terms of age, the largest number of respondents are aged 36-45, totaling 155, accounting for 39.2%. In terms of education, the largest number of respondents have a master's degree or above, totaling 174, accounting for 47.1%, followed by a bachelor's degree, accounting for 37.2%

Data evaluation

Table 6.1 Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	22.185	25.50	25.50	22.185	25.50	25.500	8.768	10.078	10.078
2	8.419	9.677	35.177	8.419	9.677	35.177	7.994	9.189	19.267
3	6.689	7.689	42.865	6.689	7.689	42.865	7.849	9.021	28.289
4	5.455	6.27	49.135	5.455	6.27	49.135	7.436	8.547	36.835
5	4.523	5.199	54.334	4.523	5.199	54.334	7.298	8.389	45.224
6	3.590	4.127	58.461	3.590	4.127	58.461	6.423	7.383	52.607
7	3.121	3.587	62.048	3.121	3.587	62.048	6.209	7.137	59.744
8	2.110	2.426	64.474	2.110	2.426	64.474	4.115	4.730	64.474

The results showed that the total variance explanation rate of these 8 factors was 64.474%, which is greater than the general standard of 60%. Therefore, it is believed that the validity of the questionnaire scale of The research is good.

Table 6.2 KMO & Bartlertt’s Test

KMO		0.941
Bartlett's Test of Sphericity	Approx. Chi-Square	26937.346
	df	3741
	Sig.	0.000

The test results show that the KMO test value of the survey data is 0.941, which is greater than 0.70, indicating that the questionnaire is suitable for factor analysis. The Bartlett sphericity test results show that the approximate chi-square value is 26937.346, and the significance probability is 0.000 ($P < 0.01$). Therefore, it is believed that the scale is suitable for factor analysis, and therefore the validity structure is good.

Table 6.3 Shows Components

Order	Components	Number of Variables	Factor Loading
1	Component 1	14	0.602-0.764
2	Component 2	12	0.720-0.802
3	Component 3	11	0.678-0.803
4	Component 4	11	0.691-0.891
5	Component 5	9	0.707-0.780
6	Component 6	13	0.630-0.805
7	Component 7	10	0.759-0.831
8	Component 8	7	0.674-0.724

From the above table, we can see that there are 8 qualified components, the questionnaire contains a total of 87 measurement questions with factor loadings between 0.602-0.891.

7. CONCLUSION, DISCUSSION AND SUGGESTIONS

7.1 Conclusion and Discussion

Section 1 Discussion of Research Objective 1

Artificial intelligence improves management efficiency, promotes talent development, drives educational innovation, reduces human errors through automation, ensures smooth and efficient information flow, and promotes educational equity and equal opportunities.

In Liaoning Province, artificial intelligence not only improves management efficiency, but also provides support for educational innovation and equity, and promotes the improvement of education quality. With the advancement of technology, artificial intelligence will play a greater role in higher education management in the future.

Component 1: Application management performance

The research findings have been found as such because applied management performance brings more efficient and fairer solutions to management. But on the other hand, we should focus on strengthening the construction of relevant infrastructure and talent training to ensure that technology really plays its due role.

Li Zihao and Wang Hejin (2021) found that artificial intelligence technology can optimize traditional teaching models, improve the initiative and active participation rate of students and teachers, and promote the development of students' multidimensional qualities, thereby improving the overall effectiveness of university teaching.

Component 2: Management optimization and evaluation management performance

The research findings have been found as such because comprehensive consideration of a series of complex application factors such as sustainability, ethics and regulatory policies can meet long-term ethical and social needs and ensure that the education system achieves sustainable progress in a rapidly developing environment.

Artificial intelligence can detect problems and adjust strategies in a timely manner, thereby ensuring the effective realization of educational goals and sustainable development. Sheetlani, Jitendra; Jadimath, (2022) found that artificial intelligence technology can provide real-time data feedback to educational managers to accurately adjust teaching strategies and professional curriculum settings, thereby improving educational effectiveness.

Component 3: System optimization and talent development

The research findings have been found as such because artificial intelligence can optimize work processes, improve skills, and thus improve management efficiency, which is the key to achieving continuous improvement in education management. Colleges and universities should maximize the effectiveness of artificial intelligence to improve the quality of education and management level.

Only by focusing on the combination of system optimization and talent training can we ensure the effective application of technology and the continuous improvement of education management. He Guohua and Liu Pei (2022) found that education managers can indirectly optimize the education system through artificial intelligence technology and improve the work efficiency and collaboration of faculty and staff. Especially when the skill level of faculty and staff is low, the optimization effect of artificial intelligence is more significant.

Component 4: Technology-driven and education innovation

The research findings have been found as such because though artificial intelligence can improve educational outcomes, the success of artificial intelligence-driven innovation depends not only on the technology itself, but also on the trust, acceptance and adaptability of teachers and managers. I believe that colleges and universities should focus on developing a framework that can both optimize teaching and management processes and cope with cultural and structural changes within educational institutions to fully accept and utilize artificial intelligence technology.

The research of Jin Yifu and Wu Tao (2016) shows that the data generated by the network technology platform developed by artificial intelligence technology has become an important basis for educational management decision-making, greatly improving teaching efficiency and goal achievement rate, and promoting educational innovation and reform.

Component 5: Management system construction

The research findings have been found as such because the process of establishing a sound management system requires educational managers to have not only technical understanding, but also interdisciplinary thinking. In addition to continuing to tap the innovation potential of the technology itself, they should also continuously improve the management system and verify the application effect of artificial intelligence in education management through practice and experimental design.

Yang Zongkai and Wang Jun (2023) found that in the management of the education process, generative artificial intelligence such as ChatGPT has gradually become an important scientific tool for improving education efficiency and personalized learning. This requires educational managers to coordinate technology and teaching to form a dynamic and flexible education ecosystem. Education process management first requires a flexible application framework and a scientific decision support system, and ultimately forms a structural change that adapts to future education needs.

Component 6: Digital Education Risk Assessment

The research findings have been found as such because establishing a digital education risk assessment mechanism is not only a necessary step to ensure the safe application of artificial intelligence in education management, but also a key factor in promoting the healthy and sustainable development of the education system. But at the same time, the quality and reliability of the data itself are always the basis for the effective

operation of the risk assessment mechanism and the basis for coping with future changes in technology and the education environment.

Liu Hao and Liu Xiaoxiao (2022) found that providing students with personalized learning plans in the digital education risk assessment framework can promote the all-round development of students.

Component 7: Education equity and quality improvement

The research findings have been found as such because although artificial intelligence has a significant positive impact in the application of higher education management, there are still differences in the specific application effects. This difference may be caused by the limitations of artificial intelligence technology itself. Therefore, artificial intelligence technology should be used as an auxiliary tool for traditional education management methods, rather than completely replacing traditional education management methods.

Wen Juan and Zhao Xuesi (2021) pointed out that artificial intelligence-assisted systems such as the TLBO algorithm can improve personalized learning and intelligent evaluation, reduce time loss in traditional teaching models, and promote teacher-student interaction and personalized needs. However, although artificial intelligence has outstanding performance in improving the efficiency of administrative tasks and supporting distance education, there are still differences in the specific application effects in student and teacher management.

Component 8: Student and stuff management

The research findings have been found as such because it is key to avoid technology from exacerbating existing inequalities. The efficiency of educational data application directly affects the scientific nature of educational decision-making. If artificial intelligence models rely on biased or incomplete data, they may inadvertently amplify educational inequality. The application of artificial intelligence should always adhere to the core goals of education. Liu Mengjun and Jiang Xinyu (2022) found that the application of artificial intelligence in education affects privacy protection, data sharing, mining and analysis, and directly affects the efficiency of educational data application.

Section 2 Discussion of Research Objective 2.

When applying artificial intelligence, colleges and universities in Liaoning Province combine advanced Western experience with local realities to promote localized

management models. The guidelines cover decision-making management, student practical ability, employment service optimization and education model innovation, and promote the digital and intelligent transformation of education management.

Component 1: Application management performance

The research findings have been found as such because artificial intelligence technology plays an important role in education management. But at the same time, it should be noted that the decision-making of AI models may be biased towards certain specific groups. Education should not be just the output of a technical system, but should be dominated by human values and educational concepts. Colleges and universities should maintain a balance between technology and educational humanities.

Li Zhengtao and Luo Yi (2019) found that improving decision-making ability and management level can promote the improvement of education quality and fairness; optimizing employment matching and service system is conducive to accurately matching social needs and improving students' employment competitiveness and satisfaction.

Component 2: Management Optimization and evaluation management performance

The research findings have been found as such because while promoting the widespread application of artificial intelligence technology, the education system itself should also strengthen the technical training and literacy of education managers. Education managers not only need to understand the basic technology and functions of artificial intelligence, but also need to have the ability to make scientific decisions in combination with educational concepts. This combination of technology and humanities will help ensure the rational application of artificial intelligence technology and avoid management blindness or technology-driven deviations.

Goralski, Tan, (2020) found in their research that education management optimization and evaluation can monitor and optimize education results in real time and promote the continuous improvement of the education system.

Component 3: System Optimization and Talent Development

The research findings have been found as such because although artificial intelligence technology provides new opportunities. However, there are still some challenges. I believe that colleges and universities should take comprehensive measures to ensure that artificial intelligence technology can not only improve the efficiency and

transparency of education management, but also promote educational equity and continuous innovation.

Establishing an efficient organizational structure and clear division of functions is conducive to improving the efficiency of education management. At the same time, promoting interdisciplinary cooperation and resource sharing can promote the maximum utilization of educational resources and promote the innovative development of the education system. Baek, S. J., & Park, S. H. (2021) found that the attitudes and behaviors of educational managers and the acceptance of new technologies by faculty and staff directly affect the implementation effect of artificial intelligence in education management.

Component 4: Technology-driven and education innovation

The research findings have been found as such because optimization algorithms such as the TLBO algorithm can provide precise support for personalized education needs and promote the intelligent and scientific development of education management. However, technological progress cannot be simply regarded as an independent tool, but should be promoted in parallel with educational concepts, educational goals, and teaching reforms. Only in this way can AI truly become a powerful driving force for educational change, rather than just a tool to improve management efficiency.

Teng Yusi (2022)'s theoretical findings show that through machine learning algorithms and data-driven decision-making models, the accuracy and efficiency of strategic implementation can be improved, and the intelligent and scientific development of education management can be promoted.

Component 5: Management system construction

The research findings have been found as such because the establishment of an intelligent decision support system, through data analysis, real-time adjustment of personalized education plans, and providing flexible decision-making basis are of great help to education managers.However, the core of education management is not only the optimal allocation of resources and the efficient execution of tasks, but also how to handle the relationship between technology and humanized management. Colleges and universities should promote the deep integration of artificial intelligence and education management system from a global perspective, and pay attention to the combination of social effects of technology and humanistic care.

Babu George (2014) found that artificial intelligence has optimization potential in teaching platform, personalized learning, automated management tasks, application support mechanism, and faculty and staff satisfaction.

Component 6: Digital Education Risk Assessment

The research findings have been found as such because the data-driven decision-making model improves the scientificity and transparency of decision-making and optimizes the allocation of educational resources. However, in the process of promoting the application of artificial intelligence technology, colleges and universities should pay more attention to how to balance technology and humanistic factors to ensure that the application of technology will not ignore the essential value of education due to excessive reliance. Miao Fengchun (2019) found that by improving the efficiency of cooperation within the education system and with the external world such as enterprises and governments, enhancing data-driven management, and reducing data privacy risks, effective changes in the education system can be achieved.

Component 7: Education equity and quality improvement

The research findings have been found as such because although the digital transformation of educational management can improve efficiency, over-reliance on technology may ignore the humanistic care and individual differences of education. Therefore, when promoting the integration of artificial intelligence and educational management, colleges and universities should focus on the capacity building of educators and the understanding of new technologies to ensure that technology truly serves educational goals.

Yang Xianmin and Zhao Ruibin (2020) found that artificial intelligence technology can promote the reconstruction of educational processes and the optimization of management architecture, break through the barriers of traditional technology, and promote the modernization of educational management. Artificial intelligence technology can provide precise support according to the different needs of teachers and students, optimize teaching quality and learning outcomes, and realize the modernization of educational management.

Component 8: Student and stuff management

The research findings have been found as such because artificial intelligence technology can promote educational equity, personalized educational services, and

balanced allocation of educational resources. By promoting educational equity and personalization, it is possible to ensure that students from different backgrounds have equal learning opportunities.

Tian Xianpeng (2020) found that sound systems and ethical norms contribute to the legitimacy of data governance.In order to avoid neglecting the improvement of learners' digital literacy and limiting their all-round development, the application of artificial intelligence technology in education management should pay more attention to the development of learners' comprehensive qualities and the expansion of educational contexts in the future.

7.2 Suggestions

1. Policy formulation recommendations Strengthen the management of AI education process and improve the efficiency of organizational cooperation.

2. Develop a flexible AI education ecosystem and build an ecological environment for the sustainable development of AI education

7.3 Establish an AI education management mechanism and system

Practical application suggestion

1. Improve management institutions, set up special institutions for AI education, and strengthen education quality control.

2. Build an effective AI education management mechanism, establish a standardized and orderly organizational environment, and promote the sustainable development of AI education reform.promote there form of AI education management mechanism to meet the development requirements of educational modernization

Suggestions for further research

1. Improve the rationality and scientificity of the elements constituting the effectiveness of artificial intelligence education management in Liaoning universities

2. Further apply management policies to colleges and universities to promote the development of artificial intelligence education management in Liaoning universities

3. Based on research samples from different provinces (cities), similar research topics are verified and confirmed to enhance the universality of the relevant research conclusions of this article

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