APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL MANAGEMENT OF UNIVERSITIES IN DALI

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Abstract

This study primarily discusses the practical application of artificial intelligence in educational management at universities in Dali, Yunnan Province. Dali is a region with a diverse ethnic population and a variety of university types. Universities in the area are gradually introducing intelligent systems, with the primary objectives of making class scheduling more efficient and rational, providing students with more personalized and comprehensive support services, and streamlining administrative management processes. In teaching management, the application of intelligent technology can make scheduling more reasonable, enable real-time tracking of teaching evaluations, and arrange more suitable learning content based on students' learning situations. In student affairs management, intelligent systems can provide early warnings by combining students' academic performance, personal behavior, and integration into campus culture. In administrative management, the application of intelligent technology can simplify approval processes, optimize archive management, and make governance in multi-ethnic regions more efficient and better suited to actual conditions.

Although intelligent reforms have shown initial results, they still face numerous challenges. Weak infrastructure investment constrains further reform progress, insufficient technical training leaves many teachers and students unable to keep pace with intelligent development, and data privacy issues also pose significant challenges. Therefore, this paper proposes three strategic recommendations: increase investment in intelligent infrastructure, enhance university technical capacity building, and establish localized data governance mechanisms. Currently, it has been found that combining intelligent applications with local regional educational development can create a virtuous cycle. Intelligent technology can drive further development in the education sector, while educational development can optimize technology. Such integration helps build a more inclusive and efficient governance system. Dali's exploratory practices provide valuable insights for intelligent reform in higher education in other resource-constrained, ethnically diverse regions.

Keywords： Artificial Intelligence, Educational Management.

Introduction

The integration of artificial intelligence and higher education will gradually become an important support for the modernization of China's education system(Knox, 2020; K. Wang, Cui, & Yuan, 2025). In recent years, China has successively issued relevant documents on "artificial intelligence education" and "Opinions on Accelerating the Digitalization of Education" for intelligent education in colleges and universities, with the aim of optimizing traditional teaching models through intelligent technology, actively exploring diversified teaching methods, providing personalized services for different students, and constructing a more scientific assessment system.

Against the backdrop of China's digital transformation in education, Dali City in Yunnan Province, home to multiple higher education institutions, has ushered in unprecedented development opportunities. Located in the southwestern frontier of China, Dali City is a region rich in ethnic diversity, making it an excellent case study for research on ethnic-specific higher education. Currently, Dali City is home to four higher education institutions. Among these, Dali University is a comprehensive university with the authority to grant doctoral and master's degrees, while Dianxi Applied Technology University is a national pilot institution for vocational bachelor's degree programs. Dali Agricultural and Forestry Vocational and Technical College and Dali Nursing Vocational College are two higher vocational colleges offering associate degrees. As a result, Dali City boasts a highly diverse higher education landscape with significant variations in educational levels, providing an ideal geographical foundation for intelligent higher education reform and pilot programs. However, this also presents challenges such as resource allocation and the complexity of educational structures.

Over the years, a variety of advanced Artificial Intelligence driven educational tools, including adaptive learning systems, intelligent attendance management, and student early warning mechanisms based on behavioral data, have been gradually introduced into the teaching and management systems of higher education institutions(Li, 2021; Sun, Asmawi, Dong, & Zhang, 2024; Yu, Xu, & Sukjairungwattana, 2022; Yu & Yi, 2020). For example, at Dali University, the majority of teachers have become proficient in using intelligent teaching platforms such as "Chuangxing Learning Pass" and "Yu Classroom" in their daily teaching processes, significantly improving teaching efficiency and student learning outcomes. The university is also actively promoting the construction of smart classrooms to meet the needs of intelligent teaching, with blended online and offline teaching becoming a routine teaching model. However, there are still significant disparities in the implementation of this intelligent teaching model across different higher education institutions. For instance, some schools may still heavily rely on manual operations in teaching and management processes such as scheduling, academic management, and administrative reporting, which significantly hinders the full implementation of artificial intelligence enabled higher education(Herzog, 2019).

In response to the aforementioned issues, this study will conduct an in-depth investigation into the actual application of artificial intelligence in higher education in Dali City, particularly in terms of its use in daily teaching operations and student management.

systematically analyze the existing issues and challenges faced by higher education institutions in Dali City in terms of artificial intelligence enabled teaching and management, such as technological gaps, personnel capabilities, and data privacy, and further propose constructive, region-specific artificial intelligence enabled higher education reform methods and measures. This aims to provide theoretical and practical foundations, as well as strategic support, for the intelligent reform of higher education in Dali City and other institutions.

Artificial Intelligence Driven Innovations in Teaching Management

Currently, artificial intelligence technology is widely used in the teaching organization and teaching process of universities in Dali City. This is especially true in universities that focus on undergraduate education. The full application of Artificial Intelligence has significantly improved the efficiency of the entire teaching process. For example, Artificial Intelligence can now be fully utilized to fully automate class scheduling and automatically analyze teachers' teaching workload and classroom usage(Kalachova & Salo, 2020). This will greatly reduce the workload of teaching management personnel and frontline teachers, significantly improve teaching efficiency, and also greatly facilitate the rational allocation of teaching resources(Alghamdi, Alsubait, Alhakami, & Baz, 2020).

Artificial Intelligence also plays a crucial role throughout the classroom(Wongvorachan, Lai, Bulut, Tsai, & Chen, 2022). For example, Artificial Intelligence can now be used to monitor student learning progress in real time, such as attendance, homework completion, and quiz status, and provide timely feedback. Artificial Intelligence tools based on computer vision and speech recognition can even automatically check attendance and identify low-engagement behaviors such as distraction and absent-mindedness(Ukwandu, Omisade, Jones, Thorne, & Castle, 2025). While these technologies are still in their developmental stages and may have issues such as recognition errors, they have already significantly improved teaching efficiency and quality, significantly reduced the burden on teachers, and freed them to focus on improving teaching quality.

In addition to teaching process management, Artificial Intelligence can also show great application potential in teaching assessment and learning support(S. Wang et al., 2024). For example, current artificial intelligence tools and predictive models can very well integrate information such as students' historical grades, attendance records, and learning behavior characteristics, so they can effectively identify students' potential academic risks and individual students with high risks. This is very helpful for teachers or counselors to carry out precise intervention for students and provide individual counseling or personalized remedial plans. Furthermore, traditional large-class teaching often suffers from a lack of discussion-based instruction. Artificial Intelligence based personalized learning systems can effectively alleviate this problem of insufficient teacher-student interaction by recommending customized learning paths. Dali City is located in the southwestern border area of China, where there are many ethnic minorities and high ethnic diversity among students. In the teaching process of various universities in Dali, Artificial Intelligence has been widely used to support multi-ethnic languages and explain ethnic cultures. In the teaching process, it can

reduce the language communication barriers of minority students in the learning process through functions such as real-time translation and dialect recognition, thereby providing more equal learning opportunities for students from different ethnic backgrounds.

Artificial Intelligence Applications in Student Monitoring and Support

In addition to the extensive use of artificial intelligence in teaching, universities in Dali City are also gradually expanding the use of artificial intelligence tools in student management, thereby improving both the quality and efficiency of student management. Artificial Intelligence not only helps monitor and analyze student learning behavior data, such as class attendance, library borrowing, and dormitory access, but also effectively monitors students' academic progress and mental health(Kearney, Dupont, Fensken, & Gonzálvez, 2023; Vieriu & Petrea, 2025). By integrating these data resources and conducting in-depth analysis, Artificial Intelligence can identify risk signals such as declining student performance and decreased class participation.

In terms of monitoring students' mental states, Artificial Intelligence can analyze and judge students' psychological conditions through analyzing their posts on forums and conducting feedback questionnaires(Olawade et al., 2024). This can effectively identify whether students have recently experienced psychological distress such as low mood and social withdrawal(Yang & Li, 2025). Currently, some universities in Dali have begun piloting the use of chatbots to provide psychological counseling and guidance to students with psychological disorders, and provide manual psychological intervention and services when necessary. In addition, some artificial intelligence based psychological screening tools can effectively identify whether students are experiencing symptoms of depression or anxiety, which is very helpful for providing early warning of psychological problems for students with high academic pressure.

As mentioned earlier, Dali City boasts rich ethnic diversity, with a significant proportion of students from ethnic minorities. Therefore, Artificial Intelligence plays a crucial role in identifying and adapting to ethnic and cultural differences among students. For example, many psychological early warning models currently used by universities in Dali City incorporate common ethnic and cultural adaptation factors, such as homesickness and language barriers, into their training. Therefore, if the system detects low or unstable moods among these students it can recommend appropriate after-school activities based on information about their hometown customs revealed during daily interactions, which can enhance their sense of belonging and engagement in learning.

Automation and Artificial Intelligence in Administrative Workflows

In addition to teaching and student management, Artificial Intelligence can also assist with university administration, significantly reducing the workload of administrative staff. Currently, many universities in Dali City are increasingly automating routine administrative tasks, such as course registration, leave approval, and exam scheduling, through rule-based systems and robotic process automation , effectively reducing approval delays and human

error. Furthermore, emerging artificial intelligence technologies such as optical character recognition and natural language processing can be used for intelligent document management, enabling the digitization and intelligent retrieval of academic and administrative archives. The effective application of artificial intelligence in archival management can significantly reduce reliance on paper archives, while also improving the security of information storage and maintaining long-term accessibility. Dali boasts a rich and diverse ethnic language landscape. Artificial Intelligence can effectively identify documents in Chinese, Bai, and other minority languages in archival management, significantly increasing management efficiency and accuracy.

Artificial Intelligence not only plays a role in the daily management of universities but is also increasingly crucial in their strategic decision-making(Narne, Adedoja, Mohan, & Ayyalasomayajula, 2024). Currently, university administrators in Dali City use artificial intelligence powered visual decision dashboards to accurately analyze key teaching management data, such as enrollment trends and course demand, enabling precise decision-making and optimized resource allocation. Furthermore, some artificial intelligence based decision-making management systems also offer predictive and analytical capabilities. These systems allow administrators to easily access forecasts and reports on key data such as student retention rates and school efficiency, effectively improving transparency and responsiveness in university management and shifting management from reactive response to proactive control. However, the effective application of artificial intelligence in management currently relies heavily on high-quality data input and technical training for staff. Therefore, a strong familiarity with the technology and data is required to maximize the benefits of artificial intelligence.

Barriers to Artificial Intelligence Adoption in Higher Education Management

While artificial intelligence has great potential to improve the efficiency and quality of higher education management(S. Wang et al., 2024), its practical implementation in Dali remains plagued by numerous challenges, primarily the inadequate and slow updating of hardware. Artificial Intelligence based higher education management systems require advanced computer hardware and high network bandwidth. However, many schools currently lack outdated computer equipment and have weak IT maintenance capabilities, severely limiting the deployment and operation of artificial intelligence based education and teaching management services. While hardware deficiencies can be addressed with subsequent government and social support, the lack of operational and practical experience among teachers and administrators with artificial intelligence management systems is difficult to address quickly. A sustainable, systematic training program is essential to gradually improve the user experience and efficiency of artificial intelligence management systems within institutions of higher learning.

In addition to computer hardware and personnel issues, data security and ethics are another major challenge facing artificial intelligence applications in universities. As we all know, Artificial Intelligence requires processing large amounts of data to make accurate

predictions and provide sound insights. Therefore, ensuring privacy protection and compliance oversight of this sensitive data, including student behavior and psychology, is crucial. Currently, most universities have yet to establish comprehensive privacy data protection mechanisms, which poses significant risks for the large-scale application of artificial intelligence in universities. This not only poses a high risk of personal privacy breaches, but also potentially exacerbates existing educational inequalities and even leads to other unforeseen serious consequences. Therefore, to maximize the positive role of artificial intelligence in university operations and management, universities should increase investment in infrastructure such as computer hardware, regularly promote training for teaching and administrative staff on the use of artificial intelligence tools, and gradually improve institutional norms for artificial intelligence use and data privacy protection mechanisms.

Conclusion

This study examined the application and future potential of artificial intelligence in the educational management of universities in Dali City. Due to its ethnic diversity and limited resources, Dali presents challenges that make direct adoption of general AI approaches difficult. Although progress has been made in teaching management, student affairs, and administrative services, issues such as infrastructure gaps, shortage of skilled personnel, and weak data governance still persist. The success of AI adoption here requires not only technological tools, but also sustained policy support, coordinated institutional efforts, and sensitivity to local cultural contexts. Dali's experience illustrates that when digital reforms are rooted in regional realities and guided by equity, they can help create more inclusive, balanced, and effective higher education practices.

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