

# Research on the Path of Improving the Efficiency of University Education Management from the Perspective of Refined Governance

—Based on the Practical Exploration of Artificial Intelligence Empowerment

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## Abstract

Under the background of the in-depth advancement of educational digital transformation and the reform of "breaking the five-only evaluation criteria", university education management is confronted with an urgent demand for transformation from an "extensive" model to a "refined" one. Based on the refined governance theory, combined with relevant literature research results and practical cases of multiple universities, this paper systematically analyzes the core connotation of university education management from the perspective of refined governance. It also points out the practical dilemmas existing in current university management in terms of management philosophy, process coordination, evaluation system, and team building. From five dimensions including concept renewal, process optimization, technology empowerment, evaluation improvement, and team construction, this paper puts forward practical paths for improving the efficiency of university education management. It focuses on expounding the enabling role of artificial intelligence technology in building intelligent management platforms and constructing collaborative mechanisms, so as to provide theoretical reference and practical guidance for universities to build a modern and high-efficiency education management system.

## Keywords

Refined Governance; University Education Management; Efficiency Improvement; Artificial Intelligence; Digital Transformation.

## 1. Introduction

With the promulgation of relevant policies such as the Overall Plan for Deepening the Reform of Education Evaluation in the New Era, China's higher education has entered a critical period of connotative development. As a core link to ensure the quality of talent cultivation and promote the implementation of reforms, the efficiency of university education management directly affects the modernization process of higher education. Various institutions of higher learning, especially private universities, as an important part of the higher education system, are restricted by practical factors such as limited resources and fierce homogeneous competition. The traditional "extensive" management model is no longer suitable for the needs of the times.

In practice, private universities such as Xi'an Peihua University, Shaanxi Tourism and Cuisine College, and Dongguan City University have continuously carried out reform and innovation to upgrade their management, providing useful practices for refined governance. In terms of theoretical significance, this study combines the refined governance theory with the author's years of practical experience in university education management, enriching the application of this theory in the field of higher education. Meanwhile, combined with the increasingly advanced AI functions in the contemporary era, it deepens the theoretical system of the

integration of artificial intelligence and education management, providing a new perspective for subsequent research. In terms of practical significance, it puts forward operable paths for the practical dilemmas of university management, providing reference for universities with limited resources, and helping build an efficient and intelligent education management system. In addition, it conducts in-depth exploration combined with the research results and current situation of vocational education and artificial intelligence in foreign countries in recent years to make up for the lack of systematic research by predecessors and provide theoretical reference for the practice of university education management.

## **2. Core Connotation of University Education Management from the Perspective of Refined Governance**

Refined governance derives from the refined management theory. Its core essence lies in taking precision, standardization, and intelligence as the orientation. Through key measures such as optimizing management processes, integrating various management resources, and strengthening the support of data elements, it realizes the improvement of management efficiency and the accurate realization of management goals, so as to maximize efficiency. In university education management, the core connotation of refined governance is mainly reflected in the following three aspects:

### **2.1. Precision of Management Objectives**

The precision of management objectives is the core prerequisite for refined governance. It emphasizes abandoning the vague goal-setting of "one-size-fits-all", and formulating specific, measurable, and achievable management objectives around core tasks such as talent cultivation, teaching quality improvement, and characteristic development. From a macro perspective, management objectives need to align with national education policy orientation and regional economic and social development needs. For example, from the perspective of "industry-education integration", universities need to accurately position talent training specifications to match the job requirements of enterprises [7]. From a micro perspective, it is necessary to focus on the specific links of teaching management, such as the improvement of teachers' teaching quality, students' academic development, and the optimization of educational administration services, and formulate personalized objectives. For instance, Dongguan City University has achieved a significant improvement in teaching quality by taking "a scientific and standardized comprehensive evaluation mechanism for teaching quality" as its goal and accurately aligning with the requirements of education evaluation reform in Guangdong Province [1].

### **2.2. Standardization of Management Processes**

The standardization of management processes is the key support for refined governance. It requires establishing standardized and closed-loop management processes, clarifying the division of responsibilities, operating standards, and connection mechanisms for each link, so as to avoid management chaos and low efficiency. The university education management process covers multiple links such as teaching plan formulation, curriculum arrangement, teaching implementation, quality evaluation, and feedback improvement. It is necessary to achieve "everything has standards and everything is implemented" through standardized design. As Chen Li pointed out, the core of enhancing the vitality of grass-roots teaching organizations lies in standardizing management processes and clarifying the three-level management responsibilities of the university, colleges, and teaching and research sections [3]. The competency model of teaching secretaries in higher vocational colleges constructed by Wu Jinxiu and Wu Jinmin [6] also provides a reference for the standardization of educational

administration management processes, ensuring that all work of teaching secretaries is carried out in accordance with rules.

### **2.3. Intelligence of Management Means**

The intelligence of management means is the technical guarantee for refined governance. With the development of digital technologies such as artificial intelligence and big data, intelligence has become the core means to improve the efficiency of university education management. The intelligence of management means emphasizes the use of technical tools to realize the real-time collection, analysis, and application of management data, promoting the transformation of management from experience-driven to data-driven [5]. Specifically, it includes building a smart teaching management platform, using AI technology for teaching evaluation and risk early warning, and optimizing resource allocation through big data. Duan Dongxia pointed out that the application of AI in the informatization construction of teaching management in higher vocational colleges can realize the integration and efficient utilization of teaching data [4]. Scholars such as Guo Liling and Wang Zhenshan have also confirmed that artificial intelligence technology can significantly improve the effectiveness of university education management [8, 10].

## **3. Practical Dilemmas in Improving the Efficiency of Current University Education Management**

Although the reform of university education management in China has achieved phased results, under the background of refined governance, there are still many practical problems to be solved urgently. These dilemmas have seriously restricted the further improvement of education management efficiency, which can be analyzed from the following aspects:

### **3.1. Lagging Management Philosophy and Weak Awareness of Refinement**

Some universities have not yet got rid of the constraints of the traditional "extensive" management model. The concept of refined governance has not been deeply rooted in the hearts of the people. In management practice, there is a common imbalance of "valuing form over effect and experience over data". On the one hand, management objectives lack accurate positioning, and the judgment on the core needs of talent cultivation in the new era is insufficient. This leads to the disconnection between various management measures and the actual running of universities and the realistic needs of teachers and students, making it difficult to play the guiding role of management. On the other hand, most managers carry out their work relying on traditional management experience. They have insufficient understanding of the application value of digital technology and the core essence of refined management, and lack the internal motivation to actively promote the reform of management model. Taking some private universities as an example, their teaching management work still takes "completing routine teaching tasks" as the core orientation, and does not fully take into account the personalized development needs of students and the precise improvement of teaching quality [3]. This forms a sharp contrast with the advanced concepts of refined management demonstration colleges such as Dongguan City University [1].

### **3.2. Fragmented Management Processes and Low Efficiency of Departmental Coordination**

University education management involves multiple departments and levels such as the Academic Affairs Office, the Human Resources Office, the Student Affairs Office, secondary colleges, and teaching and research sections. However, some universities currently have problems of fragmented management processes and insufficient inter-departmental coordination. On the one hand, there is a lack of effective communication mechanisms and

information sharing platforms between various departments, leading to scattered management data and frequent redundant work. For example, there is a lack of coordination between teaching plan formulation, student course selection, and teacher allocation, which is prone to resource waste or supply-demand imbalance [7]. On the other hand, the three-level management linkage between the university, colleges, and teaching and research sections is not smooth, the vitality of grass-roots teaching organizations is insufficient [3], and some management processes have overlapping responsibilities or gaps, affecting management efficiency. As shown in the research by Fan Linan and Zhang Yifei from the perspective of audit supervision, the fragmentation of education management processes will lead to management loopholes and low efficiency [11].

### **3.3. Single Evaluation System and Imperfect Incentive and Restraint Mechanisms**

The evaluation system is the "baton" of university education management, but the education evaluation system of some universities currently has problems such as simplification and solidification, which are difficult to adapt to the needs of refined governance. In terms of evaluation subjects, it is mainly dominated by school management departments, lacking the participation of multiple subjects such as students, teachers, and industry enterprises [1]. In terms of evaluation content, excessive reliance is placed on quantitative indicators such as exam scores and scientific research achievements, ignoring process evaluation and qualitative evaluation. A diversified evaluation system in line with the reform orientation of "breaking the five-only evaluation criteria" has not been fully established [5]. In terms of the application of evaluation results, the incentive and restraint mechanisms are imperfect. The correlation between evaluation results and teachers' performance assessment, professional title evaluation, and resource allocation is insufficient, making it difficult to fully mobilize the enthusiasm of teachers to participate in teaching reform and refined management. The practice of Dongguan City University shows that a scientific and standardized comprehensive evaluation mechanism is the key to improving management efficiency [1], while the single evaluation system has become an important factor restricting the improvement of management efficiency in most universities.

### **3.4. Weak Management Team and Need to Improve Professionalization Level**

The professionalization level of the management team is the core guarantee for improving the efficiency of university education management. However, the teaching management team of some universities currently has problems such as unreasonable structure and insufficient professionalization level. On the one hand, the personnel mobility of the management team is relatively large. Some managers lack systematic training in educational management theory and opportunities to improve professional skills, and have insufficient mastery of refined management concepts and digital technology tools [6]. On the other hand, there is a shortage of "management + technology" compound talents, which are difficult to meet the needs of intelligent management empowered by artificial intelligence [5]. The case compilation released by the Vocational Education and Lifelong Education Department of the Guangdong Provincial Department of Education shows that the construction of the teaching management team in private higher vocational colleges still faces many challenges [2]. The competency model of teaching secretaries constructed by Wu Jinxiu and Wu Jinmin [6] also reflects the reality that the professionalization level of the current management team needs to be improved.

## 4. Paths to Improve the Efficiency of University Education Management from the Perspective of Refined Governance

In view of the current practical dilemmas of university education management, combined with the refined governance theory and practical experience of artificial intelligence empowerment, this paper puts forward specific paths for improving management efficiency from the following five dimensions:

### 4.1. Renew Management Philosophy and Establish Refined Governance Thinking

Concept renewal is the premise for the implementation of refined governance. Universities need to break the traditional management thinking stereotypes and establish a governance thinking of precision, standardization, and intelligence. First of all, strengthen policy guidance and theoretical learning. Organize managers to thoroughly study policy documents such as the Overall Plan for Deepening the Reform of Education Evaluation in the New Era, study relevant theories and research results on refined governance and artificial intelligence application [5][10], and clarify the core connotation and practical requirements of refined management. Secondly, learn from the experience of advanced universities, such as the precise management concept of Dongguan City University based on the reform of teaching quality evaluation [1], and the innovative thinking of "AI + teaching" in Zhejiang Shuren University [case], to guide managers to change the concept of "valuing experience over data" and "valuing form over effect". Finally, establish a student-centered management orientation, formulate precise management objectives and measures around the needs of students' growth and personalized development, and implement refined thinking in all links such as teaching management, student management, and service guarantee.

### 4.2. Optimize Management Processes and Construct a Collaborative Management Mechanism

The optimization and coordination of management processes are the core starting points for improving the efficiency of university education management. Universities should take process standardization and management closed-loop as the core goals, and build a three-level collaborative management mechanism linking the university, secondary colleges, and teaching and research sections.

First, systematically sort out the entire teaching management process, clarify the responsibility boundaries and operation standards of each link, and solve practical problems such as process breakpoints and overlapping responsibilities. Clarify the overall coordination responsibilities of the university level and secondary colleges, and form a management pattern with clear powers and responsibilities and division of labor and cooperation. Second, build a cross-departmental collaborative management platform, break the information barriers between various functional departments within the university, and realize the efficient integration and sharing of multi-party resources such as the Academic Affairs Office, the Human Resources Office, the Student Affairs Office, and cooperative enterprises. Third, construct a closed-loop management system of "evaluation-feedback-improvement", establish a real-time feedback mechanism for management problems, and timely push the shortcomings and deficiencies found in the management process to the relevant responsible departments to promote the continuous iterative optimization of management processes.

### 4.3. Empower Technological Innovation and Build an Intelligent Management Platform

Digital technologies such as artificial intelligence are the core supporting forces to promote the refinement of university education management. Universities need to accelerate the

construction of intelligent management platforms to realize the digital and intelligent iteration and upgrading of management means. First, build an integrated smart teaching management platform, integrate core management functions such as educational administration management, teaching evaluation, resource allocation, and student management, and realize intensive control of the full scenario of teaching management. Second, deepen the application of AI technology in core management scenarios: in the field of teaching evaluation, use AI algorithms to integrate multiple information such as classroom interaction data, homework submission status, and practical achievement performance to generate personalized teaching evaluation reports [5, 10]. Finally, strengthen the construction of data security guarantee system, establish and improve data management rules and regulations and security protection mechanisms [8], strictly prevent the leakage of core teaching data and students' personal privacy, and provide a solid security support for the stable operation of the intelligent management platform.

#### **4.4. Improve the Evaluation System and Improve Incentive and Restraint Mechanisms**

A scientific and perfect evaluation system is the "baton" for the refined governance of university education management. Universities need to build a diversified, three-dimensional, and process-oriented evaluation system guided by the reform requirements of "breaking the five-only evaluation criteria", and improve the supporting incentive and restraint mechanisms. First, expand the scope of evaluation subjects, build a multi-party collaborative evaluation subject pattern of "university supervision + peer teachers + student evaluation + enterprise experts", refer to the multi-party collaborative evaluation model of Dongguan City University [1], integrate multi-party evaluation opinions, and improve the comprehensiveness and objectivity of evaluation results. Second, enrich evaluation content and methods, abandon the single quantitative evaluation orientation, integrate process evaluation and qualitative evaluation methods, and incorporate core indicators such as teachers' teaching innovation ability, student training quality, and school-enterprise cooperation effectiveness into the evaluation system [7, 9]. Rely on AI technology to realize the real-time collection, intelligent analysis, and accurate judgment of evaluation data, and greatly improve the efficiency and scientificity of evaluation work [4, 8]. Third, improve the incentive and restraint linkage mechanism, directly link the evaluation results with teachers' performance assessment, professional title evaluation, selection of excellent models, and resource allocation, commend and reward managers and teachers who have made outstanding performances in refined management work, and conduct interviews, reminders, and targeted assistance for those who fail to meet the management standards. For example, Zhengzhou Sias University has incorporated the assessment results of AI technology application into the faculty performance appraisal system [case], which has effectively promoted the implementation of refined management concepts and measures.

#### **4.5. Strengthen Team Construction and Improve Professional Management Capability**

A professional management team is the talent guarantee for the implementation of refined governance in university education management. Universities need to make efforts from multiple dimensions such as training, introduction, and assessment to comprehensively improve the professional literacy and technical application capabilities of the management team. First, carry out systematic special training, build a comprehensive training system of "basic theory + technical application + scenario practical operation", achieve full coverage of managers and teachers, effectively improve their refined management concepts and AI tool operation capabilities, carry out special training on teaching management processes, data analysis, emergency response, etc. in a targeted manner, and make up for the shortcomings of management capabilities. Second, optimize the structure of the management team, actively

introduce "management + technology" compound talents, encourage teachers to achieve the "double-shoulder responsibility" of both teaching and management, and be familiar with modern educational technology, keep up with the pace of the times, realize the in-depth integration of artificial intelligence and teaching, and ensure that teachers can take the lead in cognition and technology. Finally, improve the assessment system, realize the incentive mechanism of different pay for equal work, formulate a refined assessment index plan according to the principle of distribution according to work and more pay for more work, and incorporate work effectiveness, technical application capabilities, and innovative contributions into the assessment scope. Plan clear career development goals for teachers and managers, and fully mobilize the work enthusiasm, initiative, and creativity of all employees.

## 5. Conclusion

Refined management is an inevitable requirement for the development of university education. It is an inevitable trend of the development of this era that everyone needs to learn and understand refined management, and technical support is the prerequisite for reform. Guided by the refined governance theory, combined with various current literature and other theories, and integrating the author's long-term practical experience in university work, this paper sorts out the core connotation of university education management from the perspective of refined governance, systematically analyzes the practical dilemmas faced in the process of improving the efficiency of university education management in China, and puts forward targeted paths for efficiency improvement from five dimensions: concept renewal, process optimization, technology empowerment, evaluation improvement, and team construction. At the practical level, universities need to base themselves on their own school-running orientation and development reality, deeply integrate the refined governance concept with artificial intelligence technology, build an intelligent management platform, improve the evaluation and incentive mechanism, and strengthen the construction of the management team. Through multi-dimensional coordinated efforts, we can solve the drawbacks of the traditional education management model, build a scientific, efficient, intelligent, and convenient education management system, continuously improve management efficiency and talent training quality, continuously optimize management paths and methods, promote the upgrading of education management from "extensive" to "refined", "precise", and "professional", and continuously promote the connotative development of higher education.

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