

New Strategies for Education Management in Primary and Secondary Schools under the Background of Educational Informatization

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Abstract: Educational informatization is a crucial means of promoting educational modernization. Primary and secondary schools can effectively utilize information technology to optimize resource allocation and enhance management efficiency. This paper analyzes the current application of educational informatization in school management, identifies existing issues, and discusses its role in driving improvements. Strategies such as innovative management models, data-driven management, and strengthening teacher-student relationships and communication are proposed. Through practical case studies, significant achievements in improving teaching quality and promoting educational equity are demonstrated.

Keywords: Educational informatization; primary and secondary education; new management strategies

1. Overview of Educational Informatization

1.1 Educational Informatization

Educational informatization is an essential trend in contemporary education, involving the comprehensive application of modern information technologies in education, teaching, management, and research, thereby advancing the process of educational modernization. It represents not just a simple update of educational tools but a profound transformation in educational concepts, content, methods, and models. Information technology has become a crucial component of educational resources, providing teachers and students with unprecedented access to rich learning materials and

interactive platforms. Through advanced technologies like the Internet, multimedia, and big data, educational information transcends temporal and spatial limitations, facilitating rapid dissemination and sharing, thus broadening the horizons and possibilities of education. Additionally, educational informatization enhances the modernization and scientific management of education, enabling schools to optimize the allocation and effective use of educational resources, improving the scientific and precise nature of management decisions. Moreover, it strengthens communication between home and school, fostering educational cooperation and creating a more open and inclusive educational ecosystem^[1].



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1.2 Driving Role of Educational Informatization in Primary and Secondary School Management

The driving role of educational informatization in school management manifests in several key areas: Firstly, it optimizes the allocation of educational resources, improving resource utilization efficiency. With informatization tools, schools can accurately grasp the distribution and usage of educational resources, facilitating rational allocation and sharing. Secondly, it promotes transformative teaching methods. The introduction of informatized teaching tools and platforms allows for more flexible and diverse teaching approaches, enhancing student engagement and interest. Furthermore, it enables comprehensive tracking of student learning processes and personalized guidance, aiding in knowledge and skill mastery^[2]. Lastly, educational informatization enhances the scientific and precise nature of management decision-making. Utilizing data analysis and mining technologies, school administrators can gain a comprehensive and objective understanding of school operations and student learning, supporting informed decision-making. Additionally, it helps promote educational equity by providing quality educational resources and services to students in remote areas and disadvantaged groups through online and distance education.

2. Issues in the Application of Educational Informatization in School Management

2.1 Issues in Teaching Management

Some schools and educational administrators still adhere to traditional educational concepts and lack a deep understanding of the role of educational informatization in enhancing teaching quality and optimizing resource allocation. This lagging perspective limits the effective application of informatization in management. Teachers, as key implementers of educational informatization, often lack high-level informatization teaching capabilities. Many teachers face challenges in applying information technology and integrating digital teaching resources, hindering the advantages of informatized teaching. Additionally, insufficient training in information technology restricts their ability to flexibly utilize informatized tools in actual teaching. Traditional management methods often remain too rigid to meet the demands of the informatization era, lacking flexible management strategies to address diverse student needs and learning characteristics. For instance,

some schools continue to implement uniform teaching plans and evaluation standards, overlooking differences in students' interests, abilities, and learning styles.

2.2 Issues in Student Management

Although many schools have established student information management systems, numerous issues persist in actual operation. Problems such as untimely data updates, poor information sharing, and complex system operations impact the accuracy and completeness of student information. These issues not only increase management costs but also hinder the efficiency and quality of student management. Furthermore, home-school cooperation is vital in educational management; however, communication channels are often inadequate. Some schools fail to leverage informatization to enhance communication, making it difficult for parents to stay informed about their children's school life and effectively participate in their education.

2.3 Issues in Classroom Teaching

There are significant disparities in educational resource allocation between urban and rural areas, directly affecting classroom teaching quality and effectiveness. High-quality teaching resources and software are often concentrated in urban or key schools, leaving rural and under-resourced schools lacking. This exacerbates educational inequity and limits students' learning and development opportunities. Moreover, some teachers still employ traditional lecturing methods in classroom instruction, lacking innovation and interactivity. They do not fully utilize informatized means to enrich teaching content and methods, limiting students' interest and engagement. Such a singular approach fails to meet the diverse learning needs of students and hampers overall teaching effectiveness.

3. New Strategies for Education Management in Primary and Secondary Schools under Educational Informatization

3.1 Innovation in Management Teams

With the continuous deepening of educational informatization, the innovation and upgrading of primary and secondary school management teams are crucial for advancing educational modernization. Schools should broaden recruitment channels to attract elite talents from diverse fields. Information technology experts can serve as the technical engines

of the team, providing cutting-edge technological support for educational informatization. Data analysts can employ advanced techniques such as statistics and machine learning to deeply mine educational data, providing a scientific basis for educational decision-making. To ensure that team members can leverage their professional strengths effectively, schools must enhance training in information technology skills. This training should encompass foundational knowledge in informatization applications and advanced technologies such as big data analysis and artificial intelligence in education. Regular training sessions, seminars, and workshops can improve team members' informatization literacy and technical capabilities, laying a solid foundation for the digital transformation of school management. In the management team, members from different backgrounds and professional fields should be encouraged to exchange and cooperate, break the traditional disciplinary barriers, and realize the deep integration of knowledge and technology.

3.2 Innovation in Management Models

3.2.1 Implementing Data-Driven Precise Management

In the context of educational informatization, data becomes a vital resource for educational management. Schools should establish comprehensive systems for data collection, processing, and analysis, utilizing big data and artificial intelligence technologies to deeply analyze student learning behaviors, teaching effectiveness, and resource allocation. Data-driven precise management allows schools to identify issues and needs more accurately and formulate effective management strategies, promoting continuous improvements in educational quality.

3.2.2 Implementing Project-Based and Flat Management

To enhance management flexibility and efficiency, schools can explore project-based and flat management models. Project-based management can create cross-departmental teams around specific objectives, optimizing resource allocation and ensuring rapid response. Flat management reduces hierarchical levels, speeding up information transfer and enhancing decision-making efficiency. Combining these two management models can break free from traditional bureaucratic constraints, stimulating the creativity and engagement of management teams and improving overall operational efficiency.

3.3 Innovation in Management Methods

Smart campus platforms, as cutting-edge tools in educational informatization, are becoming powerful instruments for driving educational innovation and change.

(1) Smart campus platforms integrate core functionalities such as teaching management, student management, teacher development, and home-school communication, facilitating seamless information flow and efficient circulation. In teaching management, the platform enhances efficiency and standardization through intelligent scheduling, assignment management, and examination systems, allowing teachers to focus more on innovative teaching content. The student management system creates personalized learning profiles for each student, supporting precise teaching and comprehensive student development.

(2) Teacher development is the cornerstone of improving educational quality. Smart campus platforms provide rich resources and support for teachers to participate in online training, course sharing, and peer exchanges, continuously enhancing their professional competence and teaching abilities. The platform can also analyze teaching data, generating personalized assessment reports to help teachers identify strengths and weaknesses, providing a scientific basis for teaching improvements.

(3) Home-school communication is essential for promoting student growth. Smart campus platforms facilitate efficient communication, allowing parents to access information about their children's learning dynamics, attendance, and assignment completion, fostering collaboration between parents and teachers. Features such as live-streaming parent meetings and home-school cooperative courses strengthen the effectiveness of cooperation.

(4) The rise of online and blended teaching is another significant change brought about by educational informatization. Schools should maximize the use of smart campus platforms to develop and utilize online teaching resources, introducing quality online courses and platforms to provide students with diverse learning resources and flexible learning paths. Combining the advantages of offline classrooms, such as face-to-face interaction and practical operations, will create a blended teaching model that integrates online and offline methods^[3].

4. Case Studies on the Implementation of New Strategies in School Management under Educational Informatization

4.1 Construction and Application of Online Teaching Platforms

A city's primary and secondary schools have successfully established a unified online teaching platform in response to the call for educational informatization. This platform integrates online teaching, real-time interaction, resource sharing, assignment submission, and grading, significantly enriching teaching methods and breaking time and space constraints. Evidence shows that teachers recording micro-lessons and conducting live classes through the platform not only enhance teaching efficiency but also stimulate student interest. Students use the platform's rich resources for independent learning and engage in discussions with teachers and peers, fostering a positive learning atmosphere. The platform also provides detailed learning data reports, aiding teachers in understanding student progress and adjusting teaching strategies accordingly.

4.2 Practice of Educational Big Data Analysis in School Management

An education bureau in a district has adopted an educational big data analysis system to deeply mine and analyze multi-dimensional data on students' academic performance, attendance rates, and participation in extracurricular activities. Visual data presentation allows administrators to gain a clear understanding of learning statuses and trends across schools, grades, and individual students. Based on data analysis results, the education bureau adjusts resource allocation and optimizes teaching arrangements in a timely manner. For instance, in response to low performance in certain subjects, expert teams are deployed for in-depth research, providing targeted teaching support and intervention; Big data analysis also helps education bureaus accurately identify students with learning difficulties, provide personalized tutoring programs, and promote the improvement of education equity and quality.

4.3 Improvements in Course Management, Assessment, and Feedback

A secondary school has undertaken comprehensive reforms in course management, assessment, and feedback mechanisms using educational informatization.

The school introduced an intelligent course management system that automates and flexibly adjusts course arrangements. At the same time, a set of assessment system based on big data has been established to comprehensively evaluate students by collecting multidimensional information such as students' behavior data in class, homework completion and exam scores^[4]. The assessment results inform teachers about teaching effectiveness and are promptly shared with students and parents, clarifying learning directions and goals. The school also established an online feedback platform to encourage ongoing communication and suggestions among students, parents, and teachers, creating a positive interactive teaching environment.

Conclusion

Educational informatization presents unprecedented opportunities and challenges for primary and secondary school management. By implementing new strategies, schools can enhance management efficiency and quality while promoting comprehensive student development and advancing educational equity. In the future, as information technology continues to evolve, primary and secondary education management should maintain innovation and deepen informatization applications, laying a solid foundation for cultivating talents that meet future societal needs.

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