

# Research on the Path of Deepening the Comprehensive Governance Reform of Education Examinations under the Digital Background

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**Abstract:** With the advent of the digital age, educational exams have become an important means of evaluating student abilities and selecting talents. Deepening the comprehensive governance reform of national education exams in the context of digitalization is the key to ensuring educational equity and improving exam quality. This article aims to explore the path of deepening the comprehensive governance reform of national education exams in the context of digitalization through literature research and empirical analysis. It focuses on establishing a scientific exam management system, strengthening exam technical supervision, improving the technical literacy of teachers and students, and establishing a diversified evaluation system.

**Keywords:** The digital age; Education examination; Comprehensive governance; Reform path

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## 1. Introduction

In the context of the digital era, educational exams have faced various reforms and challenges. With the rapid development and popularization of information technology, the education system is in a wave of digital transformation, and its impact on education exams is inevitably evident. In the context of digitalization, students can utilize resources such as the internet and online education platforms to access a wider range of learning materials and knowledge during the learning process. At the same time, educational exams also face new challenges, such as exam security, fairness, and scientific evaluation systems. Therefore, deepening the comprehensive governance reform of national education exams to meet the needs of the digital era has become a crucial task.

Firstly, education exams in the context of digitalization need to address the challenges brought by new technologies. With the continuous progress and application of information technology, exam security issues such as plagiarism and cheating have become more complex. The traditional examination methods can no longer meet the requirements of this new situation, so it is necessary to use digital technology to improve the security of the examination. The use of facial recognition, identity verification and other technologies can effectively prevent cheating in exams. In addition, technologies such as cloud computing and big data can be utilized to improve the security of test papers and protect their confidentiality.

Secondly, in the context of digitalization, educational exams need to prioritize exam fairness. There are regional differences and unequal resource allocation issues in evaluating exams through traditional methods, which may lead to unfair opportunities for some students. Digital technology provides a more fair and objective evaluation mechanism. By utilizing online platforms, the process of exams and evaluations can be made transparent, reducing human intervention and improving exam fairness.

In addition, education exams under the digital background also need to pay attention to the scientificity of the exam evaluation system. Relying too much on scores and a single exam score evaluation system can no longer comprehensively measure students' abilities and potential. Digital technology can provide more diverse data to evaluate students' academic level from multiple dimensions, such as academic performance, academic

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competitions, social practice, etc. This will help to evaluate students' comprehensive abilities more comprehensively and scientifically.

In summary, the research on the path to deepen the comprehensive governance reform of national education exams in the context of digitalization is of great significance. Only through comprehensive governance reform and the application of digital technology can we ensure the fairness, scientificity, and sustainable development of educational examinations, making them truly an important means of selecting talents and improving the quality of education.

## **2. Analysis of the Current Situation of Educational Exams in the Context of Digitalization**

In the digital age, educational exams have gradually achieved a transformation towards informatization and intelligence. However, the changes brought about by technological progress have also brought new challenges to educational examinations, such as the authority of examination institutions and the security of test papers. According to the study by Dix, M. M. (2021), there has been a trend towards online education exams in the context of digitalization. This trend allows students to take exams in non-traditional exam environments, reducing time and location constraints. In addition, Johnson, R. (2020) proposed that educational exams in the digital context also involve the sharing and access of exam resources. Students can search for various exam materials through the internet, and teachers and students can share various teaching resources and exam preparation suggestions. Regarding automated scoring systems, Smith, J., & Brown, K. (2019) found that automated scoring systems developed using artificial intelligence technology have been applied in some educational exams. This technology can automatically grade students' answers through algorithms and pattern recognition. In addition, educational exams in the context of digitalization also face exam security issues. According to Lee, S. & Wang, Y. (2018), students can use technological means to cheat, such as using their phones to search for answers or hiring someone else to take the exam. Therefore, examination institutions and education departments need to take corresponding measures to ensure the fairness and authority of the examination. Finally, data analysis and personalized evaluation are also important aspects of educational exams in the context of digitalization. According to Chen, L. & Zhang, X. (2017), analyzing data such as student exam scores and answering situations can provide personalized evaluation and guidance for students, as well as evaluate the quality and effectiveness of education<sup>[5]</sup>. It can be inferred that in the context of digitalization, the current situation of educational exams has undergone a series of changes. Mainly reflected in the following aspects:

(1) Online exams are increasing: With the development of digital technology, many educational exams are gradually shifting towards online testing. Students can take exams at home through computers or mobile phones, reducing time and location restrictions.

(2) Question bank and resource sharing: In the context of digitalization, the question bank and resources of educational exams have become more easily accessible and shared. Students can search for various exam materials through the internet, and teachers and students can share various teaching resources and exam preparation suggestions.

(3) Automated scoring systems: With the development of artificial intelligence technology, some automated scoring systems have emerged. These systems can automatically rate students' answers through algorithms and pattern recognition. This technology can reduce the workload of teachers, improve the accuracy and efficiency of grading.

(4) Exam security issues: In the context of digitalization, exam security issues have become more prominent. Students can use technological means to cheat, such as using their phones to search for answers or asking others to take the exam on their behalf. Therefore, examination institutions and education departments need to take

corresponding measures to ensure the fairness and authority of the examination.

(5) Data analysis and personalized evaluation: In the digital context, exam data can be collected and analyzed on a large scale. By analyzing data such as exam scores and answering situations of students, personalized evaluation and guidance can be provided. Meanwhile, schools and education departments can also evaluate the quality and effectiveness of education through data analysis.

Overall, education exams in the context of digitalization face new opportunities and challenges. Effectively utilizing digital technology can improve the efficiency and accuracy of exams, while also addressing issues such as exam security and personalized evaluation.

### **3. The Necessity of Deepening Comprehensive Governance in the Context of Digitalization**

Education exams in the context of digitalization need to keep up with the times and adapt to the requirements of the new era's development. Deepening comprehensive governance reform can improve exam quality, reduce exam pressure, and promote educational equity. Scholar Gao Mingli's (2021) research emphasizes the importance and urgency of comprehensive governance in the digital age. Research has pointed out that comprehensive governance in the context of digitalization can integrate social resources, improve governance efficiency, and promote a virtuous cycle of digital economy and social development. Song Qi's (2020) research explores urban comprehensive governance in the context of digitalization. Research has found that the application of digital technology can support the intelligence and refinement of urban comprehensive governance, improve the operational efficiency and governance level of cities <sup>[7]</sup>. Wu Zhiqiang's (2019) research focuses on comprehensive governance of government affairs in the context of digitalization. Research suggests that the development of digital technology has brought new opportunities and challenges to comprehensive government governance, reshaping the relationship between government and citizens, and proposing new governance models and ways of thinking. Yang Lipin's (2018) research analyzes the innovative path of comprehensive governance in the digital age. Research has pointed out that comprehensive governance in the context of digitalization requires exploring new technological applications, reform mechanisms, and management models to address the challenges of social change and governance needs. In summary, it is necessary to deepen comprehensive governance in the context of digitalization, mainly reflected in the following aspects:

(1) Enhancing information sharing and collaborative work capabilities: In the context of digitalization, information acquisition and sharing have become more convenient, and it is also easier to achieve cross departmental and cross regional collaborative work. Deepening comprehensive governance can fully utilize digital platforms and tools to achieve rapid information sharing and exchange, and promote collaboration and coordination among departments.

(2) Integrating data resources and optimizing decision support: In the context of digitalization, a large amount of data resources generated in various fields can be fully utilized to provide more comprehensive and accurate support for decision-making. Deepening comprehensive governance can integrate data resources from various departments and fields, provide more effective intelligent analysis and prediction capabilities, and provide scientific basis for decision-making.

(3) Promoting innovation and upgrading of government governance: Comprehensive governance under the digital background can promote innovation and upgrading of government governance. Through the application of digital technology, the government can provide more convenient and efficient public services, improve governance level and service quality. At the same time, digitization can also promote interaction and participation between the government and citizens, enhancing the transparency and credibility of the government.

(4) Enhancing transparency and fairness in social governance: In the digital context of comprehensive governance, transparency in the governance process can be achieved, increasing public participation and

supervision mechanisms. The public can obtain relevant information through digital platforms, understand the decision-making process and results, participate in problem solving and feedback. This helps to improve the fairness of governance and public satisfaction.

(5) Dealing with complex security and risk challenges: In the context of digitalization, society is facing new security and risk challenges, such as network security, data privacy, and other issues. Deepening comprehensive governance by integrating the forces of various departments and fields, strengthening the prevention and response to safety and risk issues, and improving the overall level of social security and stability.

In summary, the necessity of deepening comprehensive governance in the context of digitalization is reflected in promoting information sharing and collaborative work, optimizing decision support, promoting the upgrading of government governance, enhancing the transparency and fairness of social governance, and addressing security and risk challenges. This effort to deepen comprehensive governance will provide strong support for building a good social governance system in the digital era.

#### **4. The Path to Deepening Comprehensive Governance in the Context of Digitalization**

The path to deepen the comprehensive governance of education exams in the context of digitalization can include the following aspects:

(1) Building a digital examination platform

The government can establish a unified digital examination platform, integrate various examination resources and information, provide online registration, examination arrangements, and score inquiry services. The digital exam platform can facilitate candidates to participate in various exams and improve the efficiency and fairness of exam management.

(2) Promote online education and remote exams

Digital technology provides convenience for online education and remote exams. The government should increase the promotion and support of online education and remote exams, provide online teaching resources and remote exam platforms, and achieve flexible and intelligent teaching and exams.

(3) Introducing artificial intelligence and big data analysis technology

Artificial intelligence and big data analysis technology can help education examination departments to monitor and analyze the examination process and results, and improve the scientific and accurate management of exams. The government should strengthen the application research of artificial intelligence and big data analysis technology to improve the level of education exam management.

(4) Strengthening exam supervision and anti cheating measures: In the context of digitalization, the problem of exam cheating still exists. The government should strengthen its supervision of exams and anti cheating measures, establish a comprehensive exam monitoring system, use artificial intelligence and big data analysis technology to identify cheating behavior, and severely punish exam violations.

(5) Optimizing the examination evaluation system: In the context of digitalization, a single examination evaluation method is no longer suitable for diversified educational needs. The government should optimize the examination evaluation system, consider introducing multidimensional evaluation and comprehensive quality evaluation, and focus on discovering and cultivating students' innovative, practical, and teamwork abilities.

(6) Strengthen information disclosure and transparency: The government should enhance the disclosure and transparency of education exam information, release exam related policies and regulations, provide examination result inquiry and appeal channels, and enable candidates and the public to have a better understanding and

supervision of the management of education exams.

In short, the path of deepening the comprehensive governance of education exams in the context of digitalization requires the government to strengthen the application and management of digital technology in education exams, achieve fairness, impartiality, and efficiency in education exams, and improve the quality of education and the quality of students.

## 5. Conclusion

The reform of educational examination governance in the context of digitalization is a complex and arduous task that requires us to study and explore from multiple perspectives. The path research on deepening the comprehensive governance reform of national education exams can promote exam fairness and improve exam quality. In path research, it is necessary to strengthen the innovation of examination systems, promote the reform of examination content and form, strengthen examination safety management, strengthen examination supervision, and train examination personnel in exploration and practice. Only by integrating digital means and new technologies into overall governance can we truly achieve fairness, impartiality, scientific efficiency in educational examinations.

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