

# Research on the Strategy of Improving the Informatization Teaching Level of College Teachers in the “Internet +” Era

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**Abstract:** Under the background of the “Internet +” era, the teaching concept and method of higher education are undergoing significant changes. The integration of modern information technology has far-reaching significance in improving the level of information education, which puts forward higher standards for teachers’ ability in information teaching. This paper discusses various factors that affect the level of information-based teaching of college teachers in the era of “Internet +”, as well as the ability that teachers need to have in information-based teaching, and also explores various strategies to improve the level of information-based teaching of college teachers, to further optimize the teaching quality of colleges and universities.

**Keywords:** “Internet +” era; Information-based teaching; College teachers; Teaching skills; Improvement strategies

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## 1. Introduction

Information technology has been widely used in many sectors of society, constantly changing and serving daily production and life, and also injecting fresh vitality into the field of education. In the process of acquiring knowledge and skills, college students rely more on teaching, and teaching skills and information literacy have a great impact on the teaching effect <sup>[1]</sup>. Therefore, teachers should constantly improve their teaching skills, cultivate information technology literacy through various ways, and better adapt to the teaching requirements of information-based teaching.

## 2. The significance of information-based teaching

In traditional teaching, teachers mainly finish teaching by delivering and summarizing knowledge, and test students’ learning effect by asking questions and doing homework. Information-based teaching provides a variety of possibilities for classroom teaching. Teachers can make use of information-based technology or

teaching platforms to interact with students in the teaching process, improve students' learning enthusiasm, and make students take the initiative to participate in classroom teaching and become the main body of the classroom<sup>[2]</sup>. Teachers can also initiate discussions, design online question and answer sessions, guide students to express their views, arouse students' thinking and produce a collision of thinking in the discussion, and stimulate students' creativity.

Information-based teaching can promote students' deep learning. Teachers can use the information-based technology of the teaching platform to set the teaching process from simple to deep into the mode of jumping through the barrier and setting up corresponding challenge reward mechanisms. On the premise of mastering basic knowledge, teachers can guide students to in-depth research on important knowledge points, complete the learning challenges, and let students gain a sense of accomplishment in learning. The application of this technology in college teaching can, to a certain extent, change students' psychological and behavioral patterns, improve their ability to accept new things and stimulate students' thirst for new things<sup>[3]</sup>.

The application of information technology in colleges and universities has greatly improved the quality and efficiency of classroom teaching and can reduce the teaching burden of teachers<sup>[4]</sup>. In the later stage of the information-based teaching process, teachers can use the teaching platform combined with information technology to understand the learning effect of students through data analysis and mining and provide students with targeted learning suggestions and recommendations for learning resources. Teachers can make use of the students' learning track, understand the specific situation of students' learning, evaluate the learning effect, grasp the key points of students' improvement and provide personalized learning plans with a specific target.

### **3. Factors affecting the improvement of information-based teaching skills of college teachers**

#### **3.1. Teaching experience**

Teaching experience can often affect the improvement of teachers' information-based teaching skills. Teachers with rich teaching experience are familiar with the teaching content, can better use information-based means to show the teaching content and combine information technology to highlight the important and difficult points of teaching so that students can concentrate their attention on the learning process and follow the teacher's teaching rhythm. Participate in the information-based teaching links designed by teachers to better understand the teaching difficulties and master the teaching key points. Teachers with rich teaching experience also have more experience and skills in classroom management. When implementing information-based teaching, teachers should not only involve all students but also maintain class order, to ensure the effect of students' participation and information-based teaching. Teachers lacking teaching experience should use information-based teaching methods to trigger students' thinking, discussion, or voting. Due to students' high enthusiasm and great emotional fluctuations, teachers lack experience and it is difficult to predict and control, the classroom order is easy to get out of control and even accidents.

#### **3.2. The adaptability of technology**

The factors affecting the improvement of college teachers' information-based teaching skills also include their adaptability to technology. Teachers with strong adaptability can explore information-based teaching platforms and methods more actively, master information-based teaching skills well, and effectively integrate information technology into teaching<sup>[5]</sup>. Teachers' information-based teaching ability is better than their understanding

level of things and differences in teaching ability, and teachers also have different cognition towards information-based teaching ideas <sup>[6]</sup>. Teachers' perception of the usefulness of information technology affects their willingness to use information technology teaching tools, high adaptability to technology will increase teachers' confidence in using information technology for teaching, and better adaptability to technology will greatly improve teachers' availability of technology resources. In the use of information technology in teaching, teachers can make use of various technical resources to deeply use the information teaching platform and try personalized teaching.

### **3.3. information technology training and guidance**

The improvement of teachers' information-based teaching skills also requires targeted information-based technology guidance to help teachers master more information-based teaching knowledge and skills, make full use of information-based technology, and better integrate it with education and teaching. However, in the current teaching process of colleges and universities, teachers have not received corresponding technical guidance, which makes their informatization ability limited <sup>[7]</sup>. Even though the level of informatization construction in colleges and universities continues to improve, it is still at a basic level in application, which is not conducive to the improvement of teachers' comprehensive ability and accomplishment. The lack of information-based guidance and guidance for teachers has a poor training effect on teachers, and the lack of an information-based teaching environment and atmosphere makes it difficult for students to effectively integrate into and adapt to the information-based teaching mode and effectively improve the information-based teaching level.

## **4. Information-based teaching ability of college teachers in the “Internet +” era**

### **4.1. Implementation ability of information-based teaching**

To give full play to the important advantages and values of information technology in college education and teaching, it is necessary to improve teachers' ability to implement information-based teaching. In the case of a large gap between the implementation of information-based teaching activities and the actual teaching environment, it is difficult to meet the requirements of information-based teaching. In the training of teachers' information-based teaching implementation ability, it is necessary to guide teachers to improve and master teaching techniques and methods such as imitation learning and transfer learning <sup>[8]</sup>. In practical teaching, they should apply what they have learned and improve their application ability of information technology knowledge and skills. In addition, in the daily teaching work, teachers should learn to listen more in-depth analysis and understanding of the teaching knowledge system, combined with the teaching content and purpose, the information technology more skillfully applied to the actual teaching work.

### **4.2. Ability of resource integration**

In the context of the era of big data, there are abundant and diverse information-based teaching resources. In order to effectively improve the utilization rate of information-based teaching resources, it is necessary to comprehensively improve teachers' teaching skills, effectively integrate resources, realize resource sharing and give full play to the maximum application value of resources. The integration of information-based teaching resources includes the transformation of online learning resources such as texts, pictures and videos used in teaching, to better stimulate students' learning enthusiasm and creativity <sup>[9]</sup>. According to the teaching needs,

teachers can effectively transform a variety of network teaching resources, enhance the interest of classroom teaching, mobilize students' learning initiative with rich and diverse teaching content and novel teaching methods, improve students' learning ability and innovation ability, and obtain ideal learning results.

### **4.3. Data analysis ability**

Information-based teaching requires teachers to have a certain ability in data analysis. Collect students' data through information technology or information teaching platform, including login frequency, online time and other information, and analyze students' learning behaviors after mastering students' learning data. After the teaching, through the student's homework submission and test results, the visualization technology is used to observe and analyze the data, identify the student's strengths and weaknesses in learning tasks, use the analysis results to adjust the pace and method of teaching, and provide personalized feedback and guidance in special cases to help students overcome learning obstacles.

## **5. Strategies for improving the level of information-based teaching of college teachers**

### **5.1. Accumulate teaching experience, adapt to information-based teaching and strengthen the concept of information-based teaching**

Teaching is a constantly changing process, so it is very important to keep learning, accumulate experience and adapt to changes. College teachers should continue to learn new teaching concepts, master new teaching methods and tools, observe the classes of other excellent teachers, learn teaching methods and skills, participate in teaching seminars or online course development, and constantly improve their teaching level <sup>[10]</sup>. While accumulating teaching experience, teachers need to realize the importance of information-based teaching, understand the significance of information-based teaching, and actively apply information-based technology in the teaching process. In the early stage, they can try to use multimedia courseware, online discussion boards, interactive boards and other functions to experience the effects of information-based teaching, such as improving students' learning interest and efficiency.

### **5.2. Guide students to change their learning concepts and improve their independent learning ability**

Guiding students to change their learning concepts is a gradual process, which requires the joint efforts of teachers and students themselves. Teachers can convey the advantages of information-based teaching to students. Secondly, they should train students in information technology to ensure that students can use information-based learning platforms or tools to complete learning tasks. Teachers can use interesting teaching content and interactive ways to stimulate students' learning interest and motivation.

### **5.3. Create an information-based teaching platform and provide personalized services**

Colleges and universities pay more attention to the cultivation of students' comprehensive ability. Therefore, in the teaching process of colleges and universities, to better improve teachers' teaching ability, they need to use the information network platform to actively build an information teaching platform, and organize teachers to learn the function and application of the platform, to continuously improve teachers' application ability of information technology. Organize teachers to integrate teaching resources after class <sup>[11]</sup>. In addition, teachers can improve the application ability of information technology, integrate various learning resources, and upload

them to the learning platform for students to choose by themselves. In this process, teachers can have a more comprehensive understanding of students' learning situation and needs, reasonably adjust teaching content, optimize teaching mode, and improve teachers' teaching skills <sup>[12]</sup>.

#### **5.4. Pay attention to professional information technology guidance and improve supporting services**

To effectively improve teachers' teaching skills, it is necessary to provide teachers with more comprehensive and professional technical guidance services according to the actual conditions of colleges and universities. This can also help teachers have a more comprehensive and in-depth understanding of various new teaching concepts and new technologies under the smart classroom mode as well as flexibly apply the teaching skills learned in practical teaching to various teaching activities to improve the effectiveness of teaching activities.

#### **5.5. Strengthen the training of information-based teaching skills and improve the ability of teaching implementation**

To improve the teaching skills of college teachers, it is necessary to achieve the expected training purpose through targeted training in information-based teaching skills. Colleges and universities should regularly carry out training in information-based teaching skills, combine the actual situation and needs of teachers, innovate training methods, enrich training content, increase the training content of information-based teaching concepts and models, and help teachers master more information-based teaching knowledge and skills <sup>[13]</sup>. At the same time, in the process of participating in the training, teachers can communicate and exchange with each other to solve the problems encountered in daily teaching. The collision of ideas in communication and sharing is conducive to the innovation of new teaching concepts and methods, to continuously improve teachers' teaching skills and provide strong support and guarantee for the long-term development of colleges and universities. In addition, in the improvement of teachers' teaching skills, colleges and universities need to formulate appropriate rules and regulations to guarantee, and promote teachers' active learning, optimize and improve the teaching assessment system, encourage more teachers to take the initiative to participate in the construction of information-based teaching, enrich teaching content by using information technology, adjust teaching methods, and create a good information-based teaching environment. With this, it can promote the comprehensive development of teachers' teaching skills <sup>[14]</sup>.

#### **5.6. Assessment of teaching ability and improve the incentive mechanism**

To ensure the improvement of teachers' teaching ability under the background of Internet +, and to encourage teachers to carry out active learning in this process, schools are required to have relevant institutional guarantees <sup>[15]</sup>. Information-based teaching ability is a process of continuous development, and it is necessary to continuously track the development of teachers' abilities and make regular assessments. The incentive mechanism can stimulate the enthusiasm and creativity of teachers in the information-based teaching environment and improve the teaching quality. Schools can select advanced individuals and teams in information-based teaching to serve as demonstration leaders, promote excellent information-based teaching experience and practices, encourage cooperation and resource sharing among teachers, and form an information-based teaching model of team writing.

## 6. Conclusion

In the process of reform, college education keeps up with the pace of the new era and actively creates smart classrooms, which puts forward new requirements for teachers' teaching skills. It is necessary to actively establish information-based teaching platforms, increase information-based teaching training, provide teachers with more comprehensive information technology guidance, comprehensively improve teachers' teaching skills, cultivate teachers' information literacy, and improve the overall teaching level of colleges and universities, to cultivate more outstanding talents.

## Disclosure statement

The author declares no conflict of interest.

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