

# *Strategy for College Teachers to Improve Their Information Teaching Ability*

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**Abstract:** The prevalence of online teaching makes more and more teachers and students realize the importance of multimedia equipment in the information age. The emergence of the new teaching mode and the application of multimedia equipment teaching also means that teachers have to improve and innovate the conventional teaching methods, so as to improve the teaching efficiency. The emergence of the new teaching mode and the application of multimedia equipment make the traditional teaching methods gradually broken, and teachers also need to adapt to this change, and constantly innovate and improve the teaching methods, so as to improve the teaching efficiency and quality. In online teaching, teachers need to pay attention to the attractiveness and interest of teaching content, through the application of multimedia equipment, design vivid and rich teaching content, to improve students' participation and interest in learning. At the same time, teachers also need to adopt different teaching methods and strategies for different student groups to provide students with personalized learning experience.

## **1. Foreword**

The advent of information age enables students to access various information and expand their horizons, and teachers to display more abstract logical concepts to deepen their understanding. In online teaching, the information background provides convenience for teachers and students, so that students can improve their personal ability without delaying their learning progress. In order to make the teaching can achieve better results under the information background, teachers need to explore and innovate the teaching methods. According to the online teaching and offline teaching, the strategies of improving the teaching ability of university teachers in the background of informatization are discussed<sup>[1]</sup>.

## **2. The connotation and importance of teachers' information teaching ability**

The so-called information teaching in short is the integration of computer and teaching, educators to make scientific and reasonable use of information technology, so that their own teaching effect can be effectively improved. Information technology plays an indelible role from teachers' lesson preparation. Scientific and reasonable design for teaching is the basis for junior high school students to understand the boring and profound physics knowledge in class. To some extent, information teaching can change the current situation of junior high school physics

classroom teaching to some extent. The application of modern information technology in teaching not only enriches the teaching resources, but also promotes the promotion of students' information awareness to a certain extent, and learns to consider problems with information thinking. Based on the development of this technology, teachers have made some innovations in teaching concepts and modes, and their comprehensive ability is strengthened in the process of improving teaching efficiency. Modern information technology helps junior high school physics teachers fully grasp the educational concept of the new era, maximize the teaching effect, keep up with the pace of China's education reform, and make positive changes to the shortcomings of our current education. Information teaching can make many problems in the past in the teaching process, thus fundamentally optimizing teaching, to a certain extent. It also contributes to the improvement of the teaching evaluation system. The application of modern information technology <sup>[2]</sup> in junior middle school physics classroom strengthens students' theoretical knowledge and practical skills, and also improves teachers' teaching level.

### **3. The problems of the vocational ability of university teachers under the background of informatization**

#### **3.1 The class way is single, lack of understanding**

Although some teachers have been able to use multimedia teaching, such as PPT and other methods, they only copy network resources without innovation in content and methods, which cannot enhance students' interest in learning. Through the analysis of the current development trend, it is far from enough to only use PPT as a teaching method. In addition, some teachers have no deep understanding of their teaching ability by using information means, so they are satisfied with the status quo, do not want to take the initiative to improve their information education level, and fail to contact the latest research results.

#### **3.2 Teaching is a mere formality and practice is not enough**

Some teachers still have the problem of teaching becoming a mere formality. Some colleges and universities have carried out information-related classroom teaching and practice plans, while some teachers like to refuse to participate in these activities with no time or energy. Even if they participate in such activities, they are just perfunctory and do not study advanced information means seriously. In fact, at present, the teachers of colleges and universities are relatively strong, many teachers have rich teaching experience, but they are always not interested in information technology, computer technology and other information teaching means, resulting in the mastery level is not ideal. The reason is that although some colleges and universities have started to build information network teaching very early, they have not been fully implemented, which leads to the lack of specific practical ability of information teaching<sup>[3]</sup>.

#### **3.3 Information means are backward and not much**

Most teachers in colleges and universities are willing to study new educational technology means, but there are still some teachers who are not willing to use it because they are not familiar with it, which is easy to make the level of informatization teaching in colleges and universities lag behind. In addition, those teachers who have mastered the information teaching methods are also unable to timely follow up the learning progress due to the busy teaching and the fast speed of the upgrading of the information technology itself.

### **3.4 The training system is not perfect, and the training is insufficient**

The imperfect training system leads to teachers being unable to obtain timely and advanced technical training. Improving teachers' information teaching level is helpful to improve teachers' professional ability. By observing the current situation of colleges and universities, it can be seen that although teachers can participate in all the training resources provided by colleges and universities, such short-term and incomplete training is difficult to achieve the improvement of teachers' information professional ability. Even if teachers obtained professional information training, back to campus, may also be because universities do not have advanced information equipment and cannot use information teaching technology, lead to training content cannot get timely practice, so the training effect, this will lead to teachers' information teaching means use ability is weak, greatly limits the good development of teachers' professional ability<sup>[4]</sup>.

## **4. Characteristics of vocational ability development of college teachers under the background of informatization**

A new era can give birth to new requirements, and the development characteristics of our current era require college teachers to make corresponding changes. From the point of the development of society, the birth of the information age of education technology, can assist teachers' classroom, our common "mu class" classroom "wisdom" "digital campus" and other new teaching methods, can effectively enhance the teaching quality, flexible use of these education technology to obtain new development and progress, has become the consensus of the whole society.

By observing the current teaching situation of colleges and universities, it can be found that college teachers do not make full use of information technology when improving their professional ability and ignore the importance of ability improvement. Teachers simply believe that they only need to improve their teaching ability to comprehensively improve their professional ability, and they do not need to organize redundant learning and training. The information age pushes all people to seek progress, and college teachers should not stop at the present, but should change the teaching mode to avoid the singleness brought by traditional teaching.

## **5. The strategy of improving teachers' information teaching ability**

### **5.1 Strengthen the construction of supporting facilities related to information teaching**

Information teaching needs certain software and hardware facilities to assist the completion of teaching, and related supporting facilities are the basis of information teaching, which is also the sufficient and necessary conditions of information teaching. Junior high schools should keep up with the trend of the development of The Times, fully improve these hardware and software facilities, do not care about the investment of funds, the improvement of supporting facilities can effectively improve the teaching efficiency of teachers and students' learning level. After the relevant hardware facilities are satisfied, the teaching effect can be improved to a certain extent, but to comprehensively improve the teaching efficiency, the relevant software environment should be upgraded, so that the modern education technology can be finally upgraded<sup>[5]</sup>.

For example, in the teaching of content change a class, related software teaching auxiliary plays an important role, in melting, solidification, vaporization, liquefaction, the use of excellent teaching software is the key to the students to better understand the knowledge, the school staff can also develop related teaching software, thus more in line with the characteristics of local students, thus more targeted teaching, teaching and research fully fusion, make the teaching resource better perfect. The development of grade group teachers' exchange meeting is also the key to improve

each other's information teaching ability, and to realize effective communication and exchange in the process of resource sharing.

## 5.2 Create a new teaching environment

The improvement of teachers' information teaching level is far from enough to rely on teachers themselves, but also the active cooperation of the majority of students. Students, as an organic individual, exist as the master of the classroom, and often have a strong subjective consciousness, which has become the key to really improve the level of information teaching. Students' learning pressure is not so big and the ability to accept new things is stronger, if you can effectively cooperate with teachers, in the charm of the information teaching, the students learning enthusiasm will be promoted, students in the process of active cooperation with teachers to informatization teaching certain positive feedback, so that teachers change the teaching mode, from previous students with teachers evolved into a cooperative relationship. After receiving positive feedback from students, we should strengthen the application ratio of information teaching in junior middle school physics classes, conduct in-depth teaching based on the content of textbooks, explain abstract physics knowledge to students, and effectively improve the efficiency of classroom teaching in the process of mutual promotion.

In the "pressure" of classroom teaching, teachers apply modern information technology to classroom teaching, and strive to let students absorb and use classroom knowledge. Teachers usually strengthen their own information teaching level, in order to play a better effect in practical teaching, change the limitations of liquid pressure and fluid pressure in the previous teaching, and make the teaching mode more flexible and teaching methods more diversified. Improve teachers' information teaching level.

## 5.3 Let teachers realize the need to improve their ability

Teachers play a particularly important role in teaching and actively guide students with insufficient understanding. Therefore, in the new era of educational background, only clear teachers' teaching concept can improve teachers' teaching enthusiasm, which is the key to improve information teaching ability, so that teachers can play a better role in the classroom. Teachers themselves only aware of the significance of information teaching for students can make modern information technology and physics teaching better integration, improve the original backward teaching mode, in the teaching design and teaching implementation has improved, teachers only actively into the ranks of information teaching, to make the modern education get real innovation. Promote the improvement of students' learning ability.

For example, in Ohm's Law, students are allowed to explore effective cooperation in the classroom, with the support of effective information teaching technology, students can improve their rapid performance, and the evolution of teachers' wisdom in information teaching in teachers and teacher communication also strengthens the understanding of information teaching, enabling each teacher to form distinct teaching characteristics and styles according to their own understanding of information teaching. In no class time to attend lectures training, through expert lectures can make teachers produce new cognition, older teachers may also have a new understanding of computer, in a variety of teaching mode of communication to promote the process of teachers' own understanding fully stimulated, let teachers themselves produce stronger teaching motivation. In a word, it is clear to take a long accumulation process to improve teachers' information teaching ability, which is not achieved overnight. It can be significantly improved in a very short time. It requires teachers to summarize their experience in actual teaching and gradually improve, and always in dynamic transformation. Of course, teachers should also have sufficient

patience when accepting new things, step by step, and improve their own teaching level while conforming to the objective law of development. Teachers keep learning their teaching concepts, realize that information teaching is a scientific tool that can produce better learning results for students, fully integrate existing teaching resources, improve teaching level under the background of education reform, and fully meet the arrival of the information age.

## **6. Online Teaching strategies to improve teachers' teaching ability**

### **6.1 Slow down the lecture speed**

Online teaching students have various phenomena such as network lag, teachers can choose to slow down the speed of teaching, in order to take care of the possible unexpected situation of each student. Slowing down the lecture speed can not only take care of the special situation of the students, but also improve the teachers' teaching ability. Because the slower you talk, the more time you think, you make progress. If the teacher only calculates the speed and prepares the lesson in a very short time, the rest of the time, the teacher and students do not know how to review, and it is also a waste of time. Instead, it is better to do exercises together with students in class to guide students to gradually understand the relevant knowledge points.

Such as teachers in science and engineering teaching, you can choose to speak examples when slow lectures, follow their steps with students, think about calculations, calculate with students' answers, which can prevent students from neglecting in online classes, and also allow students to have a clearer understanding of the steps to solve problems. Even if there is a place that you do not understand, you can record it in time. With the high efficiency of the students 'listening to lectures, the teachers' teaching ability will be affirmed and improved.

### **6.2 Disorder the order of the lectures**

When teaching, college teachers should arrange the courses in order according to their own knowledge system or students' acceptance ability and cognitive level, and they do not necessarily need to give lectures in the order of textbooks. The order arrangement of college textbooks is not necessarily in accordance with the order of students' learning knowledge, so teachers can first investigate among students, and then arrange the order of class hours reasonably. In this way, the teaching content of teachers will present a step from simple to complex, and the teaching ability will be slowly improved.

For example, when teachers teach physics courses, teachers can arrange class hours according to students' acceptance ability and personal knowledge system. If the teacher is used to mention electricity in the magnetic teaching, the teacher will first arrange the electrical class, so that the knowledge in the magnetic reference students will not feel abrupt. The class hour arrangement will not affect the teaching content, but only enables students to learn knowledge in a more acceptable way. For teachers' teaching ability, it can improve students' grades or remove students' doubts in the learning process, that is, the improvement of teachers' teaching ability.

### **6.3 Interaction with students**

In online teaching, there is a long distance between teachers and students. Although they are in the same class through the screen, teachers cannot always control the students' learning status or listening status. If the students do not attend the class well, then the efficiency of the class will be very low, even if the ability of the strong teachers can not teach the students who do not listen to the class. Therefore, teachers in the online class should first ensure that students are in good condition,

on this basis to carry out classroom teaching, so that students' learning will be effective, teachers' teaching ability will continue to improve. To grasp the trend of students, teachers can choose to ask questions randomly, and then interact with students, on the one hand, to ensure that students' classroom attendance, on the other hand, active in the classroom atmosphere, to attract students' attention. The more natural the interaction between teachers and students is, the stronger the teacher's teaching ability is.

For example, when the teacher is teaching online mathematics, the teacher can find the students to ask questions in the explanation of the example question, let the students calculate the result of a certain step or let the students say what method is used in calculating the example question. Through simple question answers, teachers can interact with students to ensure that students are in good learning condition. Grasp the efficiency of students' classroom listening, teachers' teaching quality will be improved, and their teaching ability will be affirmed.

## **7. Offline teaching teachers teaching ability improvement strategy**

### **7.1 Add a bibliography**

The teaching content of colleges and ordinary primary and secondary schools covers a wide range of knowledge, physics and mathematics knowledge, which is often the case, so teachers should be prepared to read some reference books, and then read the content of different reference books, so that teachers are fully prepared to face the performance of students in the teaching process, and can answer students' questions effectively. Effectively solving students' problems is also the performance of teachers' teaching ability. The teaching content of colleges and ordinary primary and secondary schools covers a wide range of knowledge, physics and mathematics knowledge, which is often the case, so teachers should be prepared to read some reference books. And then they read the content of different reference books, so that teachers are fully prepared to face students in the teaching process and can effectively answer students' questions, and effectively solve students' problems is also the performance of teachers' teaching ability.

For example, when teachers teach college English, they can refer to several teaching materials and have a comprehensive understanding of the usage of some fixed phrases, so that they can effectively answer the problems that the students encounter when doing the CET-4 and CET-6 examination questions. If teachers are unable to answer the questions raised by students because of the deficiencies of their own reference to teaching materials, it may make students question the teachers' teaching ability, which is not conducive to the improvement of teachers' teaching efficiency.

### **7.2 To inspire students to think**

The main body of teaching should be students rather than teachers, if every class teacher speaks a lot, feel very tired, but students' performance, the teacher should reflect on teaching methods, students no improvement may be teachers immersive lectures, and students do their own things, don't listen to the teacher. If teachers can inspire students to think by themselves and develop the habit of thinking, then teachers' teaching will become easier, and students' grades will be improved to a certain extent. Because students get answers to the questions than the teaching effect.

For example, when teachers are teaching science, in order to activate the classroom, teachers should encourage students to answer the questions, and the problem-solving methods should not be limited to the one mentioned in the textbook. What science needs divergent thinking. If students can use deeper knowledge to answer questions, their ability will be improved and they can set an example for other students. College teaching can be a process of mutual learning, not necessarily



based on the teachers' views. Teachers can also learn from students' excellent problem-solving methods. In this way, the ability of both teachers and students will be improved, which is a win-win teaching mode. Students learn to think, the performance will be improved to a certain extent, and although the performance is not the only standard to measure teachers' ability, but it has a great reference value. Therefore, in a sense, the improvement of students' performance reflects the progress of teachers' teaching ability.

## 8. Conclusion

In a word, no matter online or offline teaching, teachers want to improve their teaching ability, they need to constantly recharge and improve their professional level. At the same time, students as the main body of teaching, according to the teaching situation of students to arrange the class time, adjust the teaching speed to meet the needs of students, improve teaching efficiency.

## References

- [1] Yu Yingjun, Zhong Bingwei. *Research on the improvement of information teaching ability of local university teachers in the smart classroom environment* [J]. *Progress: Scientific Vision*, 2023 (1): 3.
- [2] Yang Chao, Wang Zhongqiang, Liu Meixiu. *Research on the improvement path of university teachers' information teaching ability* [J]. *Western Quality Education*, 2023, 9 (3): 5.
- [3] Jin Jing. *The optimization path of university teachers' information teaching ability in the era of "great wisdom moving cloud" — Theoretical analysis based on TPACK framework* [J]. *Journal of Higher Education*, 2023, 9 (5): 5.
- [4] Luo Chenhui, Liu Yan, Yang Yong, et al. *Research on the path of teaching supervision of young teachers in Universities under the strategy of "Double First-class"* [J]. *Journal of Anhui Electronic Information Vocational and Technical College*, 2023, 22 (1): 4.
- [5] Zhang Hongyue, Gao Tianyang, Niu Yuan, et al. *Thoughts on improving the ability of university teachers in the post-epidemic period* [J]. *Theoretical Research and Practice of Innovation and Entrepreneurship*, 2023 (2): 3.