

# On the Importance and Necessity of Implementing Modern Educational Technology in Applied Curriculum of Higher Vocational Colleges

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**Abstract.** Since the outbreak of the novel coronavirus epidemic, the country has carried out a teaching reform, rapidly using a variety of modern educational technologies to achieve cross-space and cross-time teaching. The research on the application of modern educational technology in teaching has become a hot topic. Taking the course of Nutrition Science as an example, this paper summarizes the relevant teaching and research focuses at home and abroad. The main points are that the application research on the combination of modern educational technology and specific curriculum content is not deep enough in terms of the content that needs special attention in the development of education and teaching. Then it analyzes the disadvantages of traditional teaching and the superiority of modern educational technology applied in teaching, affirms the importance of modern educational technology, traditional teaching and modern educational technology should complement each other and integrate each other. Finally, some suggestions are put forward on the application of modern education technology in classroom teaching, focusing on the details of teaching work, paying attention to comparative analysis, practice, effectiveness, research refinement, the data of teaching effect, school-enterprise cooperation and curriculum digitization etc. Any new educational technology is only a teaching tool and auxiliary means, which cannot completely replace traditional teaching forms, let alone be implemented for the sake of implementation. The importance and necessity of modern educational technology are built on the basis of better serving students. Everything is "student-centered", and teachers can reasonably apply modern educational technology to teaching design and leading classroom implementation.

**Keywords:** Modern Educational Technology; Applied Curriculum; Higher Vocational School.

## 1. Introduction

In early 2020, the novel coronavirus was found to be transmitted from person to person, and the epidemic broke out in China. In order to prevent the spread of the epidemic, the Ministry of Education advocated "no suspension of classes" and students can also study online during home quarantine. As a result, online courses blossom fully, teachers teach online, using a variety of modern educational technology to achieve cross-space and cross-time teaching. Although the COVID-19 epidemic has brought many challenges to education and teaching, it has also brought new opportunities, and the reform of teaching methods and teaching methods is imperative. In the past three to two years, China has entered the "post-epidemic era". At this time, the epidemic has not disappeared, and everything has not recovered as before. The epidemic may rise and fall, and a small outbreak may occur at any time, which will have a far-reaching impact on all aspects.

## 2. Relevant Research Progress at Home and Abroad

### 2.1. Progress of Relevant Teaching Research in China

Under this background, the application research of modern educational technology in teaching is a hot topic. Most of the relevant teaching research in China focuses on the content that needs special attention in the development of education and teaching, including the optimization of teaching methods. For example, Liu Yuwei and He Gengsheng conducted a detailed analysis on the impact of



the novel coronavirus pneumonia epidemic on teaching work, taking the teaching of nutrition as the research scope, and provided scientific application suggestions on how to do teaching work well under the epidemic environment [1].Liu Qingqing, Yang Yan, and Su Hongwei conducted an in-depth analysis from the perspective of the impact of nutrition education and teaching on students' learning attitude and professional knowledge, so as to explore how to further improve the application effect of modern educational technology in the actual teaching process, and respectively put forward specific and operational teaching suggestions [2].Chen Yuzhu and Huang Zhaoyong studied the specific statistical analysis methods involved in nutrition, and made a detailed analysis of their current application progress [3].Song Jiagen believes that the reform of mobile Internet teaching mode is imperative, and the use of Superstar Learning Channel to explore and practice clinical nutrition teaching mode from the three stages of pre-class, during class and after class has achieved remarkable results. The interactive teaching mode based on Superstar Learning Channel can indeed further improve the quality of education and teaching [4].Yang Jing believes that cases in clinical nutrition teaching are very important, traditional teaching concepts should be abandoned, students should be encouraged to explore independently, and students' motivation for active learning should be stimulated, that is, cases should be novel and contemporary [5].Liu Yuntao believes that in order to improve the teaching quality of courses, it is necessary to enrich the teaching forms, expand the teaching channels by using Internet resources and MOOCs, meet the new requirements of the new era, improve the teaching quality and cultivate high-quality nutrition talents [6].

However, the focus of these studies is basically how to effectively carry out courses in the context of the epidemic, and the application of the combination of modern educational technology and specific curriculum content is not deep enough. In the "post-epidemic era", teachers should not limit their understanding of modern educational technology to understanding, but should master it and skillfully apply it to the courses they teach.

Therefore, in order to do a good job in related education and teaching, it is also necessary to conduct in-depth analysis and research on the basis of existing research results, actively introduce modern educational technology, and effectively screen modern educational technology. Take Nutrition Science course as an example, that is, combine modern educational technology reasonably with the specific teaching content of Nutrition Science. Efforts should be made to improve the quality and effectiveness of nutrition teaching, so as to comprehensively improve the professional theoretical level and practical ability of medical students in higher vocational colleges.

## **2.2. Progress of Related Teaching and Research Abroad**

Foreign research on the application of modern educational technology in the teaching of Nutriology is relatively in-depth, in line with local conditions, and focuses on the teaching and practice of Nutriology.

Bursi S. conducted research and study on the combination of the novel coronavirus and nutrition, emphasizing that the teaching and study of nutrition should pay attention to the combination with practice, pay attention to the introduction of modern analytical tools, and promote the content of this discipline to achieve greater effects and higher practical value in practical application, and further emphasized the importance of modern educational technology for corresponding research work. And how to scientifically use modern technology for research, learning and communication [7].Tappy Luc analyzed nutrition research from the perspective of sugar metabolism, emphasizing that nutrition research should pay attention to daily discovery. Modern educational technology can break the limitation of time and space, so that nutrition learning and teaching can be better integrated into daily life, and pay attention to discovery and research based on its phenomena to further draw effective conclusions [8].

At present, the research on the application of modern educational technology in teaching at home and abroad provides experience for promoting the reform of teaching means and teaching methods in higher vocational medicine in China.It also explains the importance and necessity of modern

educational technology. In the special period, it does not delay learning, and it also realizes educational equity for the broad masses of the people.

### **3. The Disadvantages of Traditional Teaching**

#### **3.1. Traditional Teaching is Teacher-Centered and Guided by "Teacher-Centered Theory"**

At present, the basic theoretical framework of many college courses is Kailov model, which emphasizes "three centers", that is, teacher-centered, classroom-centered and knowledge-centered. It emphasizes "five links", namely organizing teaching, reviewing old lessons, teaching new lessons, consolidating knowledge and assigning homework. Classroom, as the main environment of teaching, is a stage for teachers to perform. Therefore, the disadvantage of Kailov's model is that it overemphasizes the "teaching" of teachers and neglects the "learning" of students. How students learn and the status of students almost do not exist in this model, and the status of teachers and students is seriously unequal. In this way, students passively accept knowledge through the teaching of teachers, resulting in the majority of students gradually develop a numb habit of not asking, do not want to ask "why", and do not know to ask "why", thus lack of learning initiative, lack of independent thinking, lack of imagination and innovation ability.

Take the course of nutrition as an example, in the teaching of the Kailov model, nutrition is the six nutrients, the role of each nutrient in the human body, the lack of what will produce poor nutrition. Boring under no interest at all, the teacher just need to keep output. But is that really the case with nutrition? No, nutrition In our daily diet, students can share their own breakfast pattern, through the knowledge of nutrition to interpret whether this breakfast is scientific and reasonable. Nutrition is practical, shared and interesting, and every little knowledge point can cause students to empathize with each other, and then become their own applicable knowledge. But unfortunately, there are still a lot of formalism, dogmatism, teacher-centered respect for the Kailov model, perhaps a huge inertia force in the continuation.

#### **3.2. Traditional Teaching Methods are Simple.**

The traditional teaching method is mainly the mode of projection slide for teaching explanation, the teacher in front of several PPT dictate the content, in some areas, the teacher even do not have PPT in class, can only write directly on the blackboard, in this case, students listen to and take notes. This kind of teaching means is single, and the classroom teaching is boring.

Under the traditional teaching, a lesson has passed, the teacher wiped the blackboard, the notes can not be added too late, it is difficult to copy, can only chew the textbook or ask the teacher, but the students under the traditional teaching basically do not like to ask, which seriously hit the students' ambition. Of course, from the perspective of teachers, under the traditional teaching mode, they cannot obtain the teaching information of the whole lesson, do not know how to improve the teaching content, and cannot obtain the systematic classroom effect of students.

#### **3.3. Traditional Teaching Methods and Contents Ignore Students' Individual Differences and Generally Adopt a One-Size-Fits-All Approach.**

In traditional teaching, a teacher gives classes to dozens or even hundreds of students at the same time, and these students have different levels, and the teacher will not do a study before class, which is basically the same as the previous model. The standard of teachers in class is to teach knowledge points in textbooks according to their own knowledge and knowledge, instead of designing teaching content according to students' characteristics. Teachers are purely indoctrinative teachers, and it is difficult for students to give effective feedback on classroom evaluations. In this way, teachers are more likely to ignore students' individual differences and adopt one-size-fits-all teaching methods.

Vocational college students generally have a poor foundation, but their practical ability is OK. What if they blindly carry out theoretical indoctrination? Undergraduates generally have a good foundation,

but their ability to combine theory with practice is weak. If they only focus on practice, can they be admitted to graduate school? These two problems both appear in reality. If the vocational college blindly inculcates theories, the students will not understand them and thus hate learning. If the undergraduate college blindly focuses on practice, the result is likely to be that the students know why they do not know why, so it is difficult for them to pursue a higher level of education. In traditional teaching, what the teacher teaches largely depends on what is written in the textbook and what the teacher knows. Ignoring the individual differences of students in this way often results in unsatisfactory teaching results and limited learning for students.

### **3.4. The Traditional Teaching Can Not Well Combine the Theory Teaching with the Practical Application**

Traditional teaching content is relatively slow to update, and the content of teaching materials often cannot be updated in a timely manner according to the existing theoretical and practical research conclusions. As a result, the knowledge learned by many students is relatively backward, unable to adapt to the rapid development of modern information and digital learning needs, and unable to meet the needs of society for talents.

Imagine, after graduating from school, if students come to the society and find that what they have learned is five or even ten years ago, or has been eliminated, what is the meaning of three or four years of study? Traditional teaching is too confined to textbooks, but how long does it take for textbooks to be written, reviewed and then published? In the rapidly changing modern society, for some professional students, such as electronic information majors, it is likely that when students get textbooks, the information is already "outdated". In this case, teachers are still only reading textbooks only indoctrination, do not contact with reality, do not contact with development, can cultivate the society and scarce industries need talents? Can we cultivate competitive pillars? No.

These drawbacks of traditional teaching run counter to the development trend of "student-centered" teaching reform. From the perspective of students, traditional teaching is characterized by monotonous and backward learning content, passive learning habits, isolated learning methods, and lack of practical ability and ability to apply theoretical knowledge.

The implementation of modern educational technology can make up for some drawbacks of traditional teaching and realize the organic integration of modern educational technology and traditional teaching.

## **4. The Superiority of Modern Educational Technology Applied in Teaching**

### **4.1. The Diversity of Modern Educational Technology**

Modern educational technology is an educational technology based on modern educational ideas, theories and methods, guided by the viewpoint of system theory and guided by modern information technology. It is a teaching method and means that combines modern information technology (multimedia, artificial intelligence, virtual reality simulation, online teaching platform, digital image, electronic communication, etc.) to engage in teaching work. Focus on the traditional teaching content through new forms or through modern technology to constantly innovate teaching ideas, enrich teaching content, increase its theoretical content and enhance its practical effect.

Diversified modern educational technology represents the diversity of teaching means. Teachers can apply different teaching means according to their needs. For example, teachers can send an in-class exercise on the Learning APP, obtain students' knowledge points according to the correct rate of the in-class exercise, and adjust the class progress at any time according to students' conditions.

## **4.2. The Timeliness and Integration of Modern Educational Technology**

The introduction of modern educational technology can significantly improve the modernization level of education work, can significantly improve the effect of education and teaching work, adapt to the needs of social development, enrich the teaching content in time, expand the teaching boundary and knowledge scope, and realize the integration of disciplines. Compared with the traditional teaching, the implementation of modern educational technology in the classroom can effectively learn from each other.

Take the course of Nutrition Science as an example, the introduction of modern educational technology can better do the teaching of nutrition science. For example, recording a micro-video of designing meal collocation with calculation algorithm can make students who do not understand listen to it repeatedly, improve the quality of teaching work and teaching effect, and constantly enhance the enthusiasm and learning interest of college students in learning this subject. It can enhance their creativity and professional practice ability level, and then send more excellent professionals to the society.

The emergence of modern educational technology provides some solutions to students' individualized differential learning. It is worth noting that the introduction of modern educational technology to participate in teaching practice is still in the initial stage of trial for many colleges and disciplines, and blind one-size-fits-all should be avoided. There are many kinds of modern educational technology, how to effectively select, how to effectively combine with specific curriculum content, and how to apply reasonably are also what we need to study. It has become an important topic of teaching research to select appropriate modern educational technology according to the content of each major and subject, the particularity of student groups, professional level and professional knowledge, and comprehensively improve the level of education and teaching work. It is important to improve the modernization and scientific level of education work, stimulate the potential of students, and improve the quality of education. It is of great significance to enhance their sense of cooperation, improve their ability of communication, research and discussion, create a modern teaching environment and learning atmosphere, and then improve the professional level of all students and send more professional talents to the society.

## **5. Suggestions on the Application of Modern Educational Technology in Classroom Teaching**

In response to the country's positioning of higher vocational education, higher vocational colleges focus on training technical skills talents, training according to the needs of the market, which requires students to effectively master a technology, where does the technology come from? It comes from the knowledge system in the classroom, but also from the practice of students in the classroom and society. The theoretical level of vocational college students is slightly lower, but the practical ability is higher. The implementation of modern educational technology, such as virtual simulation technology, will transform complex theories into hands-on exploration, and naturally have a more profound grasp of technology. In the teaching of applied courses in higher vocational colleges, the introduction of modern educational technology can not only realize one-to-many interaction in class, multi-to-one evaluation, but also realize the complete review of materials after class. Therefore, the teaching of application-oriented courses in higher vocational colleges should pay attention to practice and technology, and modern educational technology should be reasonably implemented in it. The role of modern educational technology in applied teaching cannot be ignored, teaching should no longer be limited to just 40 minutes, limited to the classroom.

Here also put forward some suggestions on the application of modern educational technology in classroom teaching.

### **5.1. Pay Attention to Teaching Details.**

In the actual introduction of modern educational technology to education and teaching work, from the teaching design, the explanation of each knowledge point, the main problems of students, and which type of case teaching and practical application methods are adopted, the study and selection of modern teaching technology and teaching methods are focused on highlighting details and closely related to the teaching effect. If the existing practical training means are insufficient, VR virtual simulation can increase the sense of context, deepen the depth of teaching from details, make learning from abstract to concrete, and guide students to further inquiry learning.

### **5.2. Pay Attention to Comparative Analysis.**

We can try to use different modern educational technologies to conduct specific analysis and research on the application of different modern educational technologies through comparative analysis, mainly from the aspects of the close connection between them and the teaching content, the classroom teaching effect, the enthusiasm of students to learn and the improvement of students' practical ability. Pay attention to the details to improve the work effect.

### **5.3. Focus on Practice.**

Based on the actual teaching work and learning effect, the curriculum content is reorganized and combined with the actual post work to design "project-based teaching", focusing on finding and solving problems in practice, avoiding the subjectivity of theoretical research.

### **5.4. Focus on Effectiveness.**

In the post-epidemic context, students have the habit of learning online. We are committed to studying the teaching of various disciplines that can effectively cope with the challenges of the epidemic and combine with modern educational technology, and should pay attention to the effectiveness.

### **5.5. Pay Attention to Research Refinement.**

The research direction is specific and targeted. Through the research on the teaching work of various disciplines, emphasis is placed on adding research indicators, and on the basis of existing research, the content of research indicators is enriched, which can effectively improve the effectiveness of teaching work and further enhance the effectiveness of relevant research.

### **5.6. Pay Attention to Teaching Effect Data.**

Students' homework completion, student sign-in, interaction between teachers and students in class, and interaction between students and students in class can all be presented in the form of data. The teaching effect is no longer simply a few words "excellent", "good" and other subjective evaluation, but has the support of specific quantitative standards, and presented in the form of numbers, which is conducive to the development of "student-centered" classroom.

### **5.7. Focus on School-enterprise Cooperation.**

Make full use of platforms such as Superstar Learning Pass and Wisdom Tree, which can provide technical and data support.

### **5.8. Focus on Curriculum Digitization.**

Each course can be built into a model course and a high-quality online course, which is conducive to the promotion of the course and the fairness of education. Before the implementation of each course, there should be a complete course framework, and try to form a team to make a good plan from the very beginning to make the course to the best.

In addition, there are many vocational skills competitions now, whether it is the multimedia courseware competition and teaching ability competition in which teachers participate, or the skills competition in which teachers guide students to participate, they are all for the purpose of "promoting teaching by competition, promoting learning by competition, promoting reform by competition, and promoting construction by competition". The skills competition in which students participate is "competing students" on the surface, but in essence, it is also "competing teachers". Teachers with low standards cannot win prizes in competitions. How to impart professional knowledge to students and how to train students with high skills to be invincible in the skills competition puts forward higher requirements for vocational teachers. It requires appropriate use of modern educational technology to carry out reasonable teaching design and teaching evaluation, stimulate students' interest in learning, test the deficiencies in teaching and learning, promote teaching reform, promote the construction of excellent courses and training bases, and ultimately cultivate more excellent skilled talents who meet the needs of society and meet the needs of positions. The mere participation has played a great role in promoting the teaching level of teachers in higher vocational colleges. It can be seen from this that under the competition of various national policies and organizations, the popularization and application of modern educational technology is also unstoppable.

## 6. Summary

In the past three years, modern educational technology has risen rapidly. There are many researches on modern educational technology at home and abroad. We recognize the disadvantages of traditional teaching mode and the advantages of modern educational technology, which shows that modern educational technology is necessary and important to assist teachers to complete a perfect lesson. The classroom is an activity, and any new educational technology is just a teaching tool. How to apply modern educational technology in the classroom is also very important. In view of this problem, the author also puts forward some suggestions. Modern educational technology can not completely replace the traditional form of teaching, we can not implement in order to implement, everything should be "student-centered", according to the students' learning situation, according to the needs of the market, classroom design, so that teachers really become the "director" of the classroom, make good use of modern educational technology this weapon, so that students really become the "starring" in the classroom.

Finally, a sentence in the "China Education Modernization 2035" issued by the Central Committee of the Communist Party of China and The State Council as the end, "use modern technology to accelerate the reform of personnel training mode, and realize the organic combination of large-scale education and personalized training." Take this as our goal!

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