

Improving the Quality of Network Education for Automobile Majors in Higher Vocational Colleges under the Novel Corona Virus Epidemic

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Abstract: Under the outbreak of the novel corona virus, universities and colleges respond to the request of the Ministry of Education to “postpone the opening of school without stopping learning”, and actively carry out network education. The automobile major in higher vocational colleges should renew teaching concepts, explore the advantages of network education, and adopt practical, flexible and diversified methods and means to carry out online teaching, so as to mobilize students' learning initiative and enthusiasm, increase students' interests in learning and improve the quality of network education.

1. Introduction

Under the situation of pneumonia epidemic caused by the novel corona virus, the Party's Central Committee deployed that we must put people's life safety and health in the first place, and took the epidemic prevention and control as the most important work at present. According to the requirements of the Ministry of Education on “postpone the opening of school without stopping learning”, departments of education in all provinces and cities have studied and formulated plans on the education in colleges and universities during the period of epidemic prevention and control. Higher vocational colleges have arranged online teaching programs and carried out network education in accordance with the spirit of superior departments. The development of network education in higher vocational colleges is a good opportunity to renew the teaching concept and explore the advantages of online education.^[1] Teachers of automobile specialty in higher vocational colleges should closely follow the teaching contents, improve the quality of network education and support the nationwide epidemic prevention project. Therefore, under the current situation of the epidemic, this paper puts forward methods and means to improve the quality of online teaching for automobile majors in higher vocational colleges, looking forward to providing suggestions and improving the teaching quality of higher vocational colleges.

2. Making Reasonable Plans for the Implementation of Teaching Program and Building the Curriculum System for Network Education

The teaching program is the overall planning of the curriculum, reflecting the system structure of the course. It stipulates the way of mutual structure of different course types, as well as the learning methods and proportions of different courses. It is an important basis for the implementation of teaching work and an important guarantee for teaching quality. The network education during the period of epidemic also needs a reasonable teaching program. A scientific network education curriculum system should also be built to realize the teaching goal and the talent training goal during the period of network education.

2.1.Strengthening Guidance on Values Education as well as Life Safety and Mental Health Education; Providing Ideological and Political Courses, Epidemic Prevention and Control Courses, Psychological Courses and Other Related Courses.

Under the situation of epidemic prevention and control, schools around the country should

strengthen the responsibility education, gratitude education, life education, public safety education and mental health education, in order to guide students to constantly improve their physical and mental health conditions and personality. Students should learn from meritorious deeds, inherit and carry forward virtues, and hold the love for the party, the people and socialism.

2.2 Adjusting the Schedule of Professional Curriculum and Selecting Courses Reasonably

Not all courses can be taught online. There are many practical courses for automobile majors in higher vocational colleges, such as the practical operation courses of *Automobile Secondary Maintenance* and *Automobile Assembly and Dismounting*. This kind of courses require students to practice and operate in the real training site, which is not suitable for online teaching. This kind of practical courses need to be implemented after the school opens.

2.3 Adjusting Network Education Schedule

Online teaching requires students to use computers, tablet computers, mobile phones or other tools. If students watch the screen for too long, they may feel eyestrain. In addition, students' attention is limited and cannot learn live lessons for a long time. It is suggested that there should be no more than four lessons a day. In principle, the school can arrange two lessons in the morning and two lessons in the afternoon.

3. Strengthening the Management of Teaching Links and Improving Teachers' Network Teaching Ability

Strengthening the management, standardization and supervision of teaching links is also the key to improve the quality of teaching. The school can designate the leader for each course, who is responsible for formulating the study and teaching plan. At the same time, through online lectures, teachers' information-based teaching ability can be trained. In the teaching process, we should strictly manage each links, supervise teachers' network education, establish an online teaching quality evaluation system, unblock the information feedback channels, and strengthen the communication with students.

3.1 Teachers of the Course Group Should Select Appropriate Contents for Online Teaching and Formulate the Teaching Plan

The person in charge of each course shall be designated to take the lead in formulating the working plan for online teaching. Teachers need to make detailed plans for different links of online teaching, including specific chapters and sections in one lesson, the teaching design, the classroom process management, after-school assignment, online answering for questions as well as the interactive assessment process.

Higher vocational automobile education emphasizes practical ability and requires the close combination between teaching contents and the post duty. The teaching method of integrating theory with practice is generally adopted. Facing the form of network education, teachers should adjust the curriculum schedule and the teaching plan, select and design teaching contents which are suitable for network education, and put the practical part of the course for offline implementation. Knowledge points which can attract students' attention can be selected for network education to mobilize students' learning initiative. An example is the project *Manual Transmission* in the course of *Construction and Maintenance of Automobile Chassis*. In the education, the theory and practice are integrated. The structure of manual transmission can be taught through the virtual simulation model in network education; the principle of manual transmission can be taught by the help of animation in network education. The dismounting and detection of transmission should be put into offline links after the start of school.

In the context of the epidemic, we should pay attention to the combination between the teaching content and the ideological and political elements to deepen students' love for the party, the people and the socialism. Examples include the most beautiful heroes in harm's way, young volunteers, as well as leaders of the automobile industry who actively donate money and things. Their deeds can

be taught and discussed in the online classroom of professional courses.

3.2 Training Teachers' Online Teaching Ability

Through online lectures, the teaching ability of teachers can be trained. The training contents include the use of online broadcast software, the use of screen recording software, the skills and precautions of online teaching, as well as the objectives of online teaching. Teachers are required to learn online teaching skills and improve the ability of information-based teaching, in order to improve their online teaching ability and ensure the quality of online teaching.

3.3 Establishing the Quality Evaluation System for Online Education

We should establish a teaching quality evaluation system with classroom teaching as the center and students as the main body. By adopting online supervision measures from the three levels of the school, the department and the course leader, problems in online teaching can be found and solved in time; the level of standardized and refined teaching management can be improved.

4. Implementation Approaches for Teachers to Improve the Quality of Online Teaching

The network education develops rapidly in our country, but higher vocational teachers generally adopt the way of offline teaching or combining offline with online teaching.^[2] They do not have sufficient experience in remote teaching based on the Internet, and there are some problems in teaching quality. The teachers of automobile specialty in higher vocational colleges should study the methods and means of network education by themselves to improve the information-based teaching ability.

4.1 Mastering Methods of Network Education

Methods usually adopted in online education include the live broadcast, open courses online, online learning relying on sharing platforms and recording teaching videos.

The live teaching platforms include the QQ group live broadcast, the DingTalk live broadcast and others. It is necessary for teachers to skillfully operate these software and master their functions. They do not only need to use the live broadcast function, but also need to use the platform to interact with other teachers and students. In addition, teachers need to do a good job in teaching preparation to prevent abnormal phenomena in broadcast, prepare a standby live broadcast platform and complete the test of online live broadcast before teaching.

Teachers can use high quality teaching resources online, such as national and provincial excellent resources, online courses and professional teaching resource database, or build resources by themselves. Referring to videos on Xuexi.cn, teachers can make a 1-3 minute video for each knowledge point, preset problems and then push the problems and videos to students through the teaching platform, so that students can learn independently, and then submit their answers on the platform to finish the task. We should make full use of online classroom to provide students with online learning, online interaction, online tests, class activities before and after class as well as other services.

Teachers need to pay attention to cultivating the self-study ability of vocational students, and consider the method of online courses. Common online education methods include live broadcasting, video recording and other active online teaching methods. No matter what kind of network education method is adopted, teachers should focus on cultivating students' self-study ability, mobilizing students' enthusiasm and improving their learning initiative.^[3]

4.2 Reasonable Use of Network Education Methods

Network education should fully reflect the feature of "leading by the teacher and centering on students". Teachers' guidance is still a very important factor. Many students do not adapt to online learning, or are not very good at self-learning. At that time, the leading role of teachers should be fully reflected. Teachers can guide students to use appropriate learning methods, and require students to achieve specified teaching objectives. In the process of online teaching, teachers can't

see students. They can use the task driven method, the group cooperation method, the competition method and other teaching methods online.

The task driven method means, teachers need to release tasks online, and students complete the tasks. It can guide students to learn independently. The task serves as the guidance to complete the teaching goal. In network education, teachers can share learning resources with students, or ask students to collect information on the Internet. They can communicate and interact with students on the Internet. After students complete the task, they can upload the homework to the teaching platform. Teachers review their achievements, and provide corresponding explanations, so as to improve students' understanding ability. The network platform has a large amount of information and fast information transmission speed, which provides a broad platform for the implementation of the task driven teaching method.

The group interaction method means, when assigning tasks, students are required to form groups, and then discuss online and complete tasks. Academic evaluation is carried out on the basis of group work. Group online discussion can reduce students' sense of isolation in online learning to some extent, improve their participation and enthusiasm, and cultivate their ability of using online tools in communication and coordination. Group tasks that can be arranged in the form of writing or displaying reports and online debates.

The competition method means, under the premise of clear learning theme and learning objectives, different groups can implement the same project. The network learning space is given to evaluate the implementation plan, process and result, and to analyze the best solution of each group's problem. The teacher should start from the subject aims, analyze the learning contents, determine the subject and goal of the project, specify the competition rules and evaluation criteria, and evaluate the competition results. Students need to participate in the project, learn to make self-evaluation and comment on works of other groups.

4.3 Network Assessment and Evaluation

All methods of online courses cannot provide teachers with the opportunity to directly face students. They can not get direct teaching feedback, and can not timely control the classroom links from students' learning states. The way to solve these problems is to evaluate students' learning achievements. In online education, effective evaluation plans can not only accurately evaluate students' learning situation, but also improve the teaching effects and help students in the learning process.

Network assessment can be divided into two types: process assessment and summarized assessment. Process assessment is the evaluation carried out by teachers in the teaching process. Its aim is to understand students' learning situation and improve students' learning quality. Summarized assessment is usually a formal evaluation, which is used by teachers to assess students' knowledge level. In the online course academic assessment, the two kinds of evaluation are indispensable; the process assessment is particularly important for teachers to control the online classroom. The results of tests conducted in each stage of online course can not only reflect students' participation degree, but also give teachers timely feedback. Teachers' comments can also help students to form clear understanding on their learning effectiveness. Teachers' evaluation process runs through many links of online teaching. Before the class, related resources and materials are distributed to students. At the beginning of the course, the teacher evaluates students' knowledge reserve through the quiz, so as to better understand students and interact with them. In the process of teaching, teachers set up quizzes and Q & A links in multiple learning stages to understand the learning effect of students, evaluate their understanding of the course contents and determine whether they can go in the next stage. Once students submit their answers, teachers need to provide timely feedback. At the end of the course, the academic assessment questions need to cover students' learning outcomes of each stage. Finally, it is necessary for teachers to evaluate students' performance according to various types of evaluation (such as question answering and test scores).

4.4 Integrating Education with Production Practice after Employment

Vocational education should pay attention to the integration of schools and enterprises, and

realize the “introduction of enterprises into courses”. In the process of online teaching, teachers should closely integrate the teaching content with the actual work, and keep up with the industrial development trend. The tasks of students should be similar with tasks faced by professionals in the actual working situation, so as to mobilize students' learning enthusiasm and initiative. We can also invite part-time teachers from enterprises. They can give lectures on new trends and new technologies of the industry in the online classroom, or participate in the discussion and interaction. Through the “introduction of enterprises into the course”, we can improve the professional quality of students.

5. Conclusion

Under the situation of the epidemic, higher vocational colleges need to carry out online education. The development of network technology provides a good opportunity for schools to renew the teaching concept and explore the advantages of online education. Teachers of automobile specialty in higher vocational colleges should improve their online teaching abilities, mastering online education skills, and carefully arrange the teaching contents to improve the teaching quality, and support the nationwide epidemic prevention project.

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