

Investigation on Students' Learning Satisfaction of Online Courses in Colleges and Universities under the Epidemic Situation of COVID-19 and Analysis of Influencing Factors

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Abstract. With the development of network technology and the enrichment of learning resources, the combination of teaching and technology subverts the traditional education mode and learning mode. Under COVID-19 epidemic, it is impossible to teach face-to-face and gather on a large scale. In order to avoid the spread of the epidemic to the campus, at the request of the State Council and the Ministry of Education, all kinds of schools across the country have postponed the opening of their classes and implemented the "suspension of classes without stopping learning". During COVID-19 epidemic, colleges and universities changed their teaching methods from traditional classroom teaching to online teaching. In the process of college students' participation in online learning, colleges and universities should take the initiative to pay attention to the effect of online teaching mode and analyze the influencing factors of college students' participation in online learning, so as to better carry out online teaching and complete teaching tasks and plans. Based on the teaching theory of distance education, this paper analyzes the students' learning satisfaction and influencing factors of online courses in colleges and universities, and provides ideas for improving and perfecting online teaching methods and enhancing the subject consciousness of college students.

Keywords: COVID-19 epidemic; Net class; Satisfaction; influence factor.

1. Introduction

School is the pure land of education and the place where people gather. Under COVID-19 epidemic, it is impossible to teach face-to-face and gather on a large scale. In order to avoid the spread of the epidemic to the campus, at the request of the State Council and the Ministry of Education, all kinds of schools across the country have postponed the opening of their classes and implemented "suspension of classes and non-stop learning" [1]. Due to the influence of COVID-19 epidemic, colleges and universities across the country have delayed the start of school, and the new semester adopts the way of network teaching, which has opened up a new mode of education teaching in an all-round way. There was a network teaching mode long before the epidemic, but it was not fully implemented, and the traditional teaching mode is still the main mode in colleges and universities across the country [2]. At present, with the rapid development of network technology, under the condition of COVID-19 epidemic, the online teaching mode has become an important mode and means of teaching in primary and secondary schools and universities in China [3]. During COVID-19 epidemic, colleges and universities changed their teaching methods from traditional classroom teaching to online teaching. During this period, college students' online learning satisfaction has a significant positive correlation with learners' external learning motivation, teachers, online curriculum design and other factors [4]. Due to the influence of COVID-19 epidemic, universities all over the country started online teaching. Such a large-scale online class is the first time in China, and the network platform has been widely used, which has been recognized and paid attention by many people, but there are still many problems [5]. Because of the large number of users, the reaction problem is more representative.

College students' learning satisfaction refers to an intuitive feeling or subjective feeling that college students can meet their own desires and needs in the learning process, which is mainly concentrated in learners' learning forms, learning processes, activities and subjective enjoyment of achievements. With the opening of online teaching mode in some areas of China, online teaching seems to become a trend. In the process of college students' participation in online learning, colleges

and universities should take the initiative to pay attention to the effect of online teaching mode and analyze the influencing factors of college students' participation in online learning, so as to better carry out online teaching and complete teaching tasks and plans [6]. Due to the increase of online courses for Chinese college students, the teaching burden of online courses in schools is increasing day by day [7]. Therefore, in order to solve the related problems of college students' participation in online learning, we should implement more efficient online teaching service mode. College students' learning satisfaction is an important standard to measure the learning quality of online courses [8]. Studying the influencing factors of college students' participation in online courses will help to ensure the successful completion of their own studies and promote the implementation and improvement of normal teaching plans in universities [9]. Based on the teaching theory of distance education, this paper analyzes the students' learning satisfaction and influencing factors of online courses in colleges and universities, and provides ideas for improving and perfecting online teaching methods and enhancing the subject consciousness of college students.

2. The current situation of online teaching management in Colleges and Universities

2.1 Online courses

Many platforms also provide cloud services for colleges and universities free of charge, cooperate with colleges and universities to import data of teachers, students and courses, and export data of students' online learning, thus giving support to teaching big data. E-learning is not only a challenge for students, but also a new challenge and study for teachers in teaching. Offline teaching requires students to enter the classroom and face-to-face with teachers, so more diverse teaching forms can be adopted. Online teaching may be detrimental to students in poor areas, emphasizing the role of regular communication and interaction [10]. In order to ensure the teaching and learning effect, most colleges and universities will choose to teach only public elective courses and some professional elective courses online, while other modules of the curriculum system will be taught offline.

Nowadays, "study at home" requires students to be relatively self-disciplined, and also puts forward requirements for students' home network environment. We need a stable network conditions and basic online teaching equipment, including computers, mobile phones, tablet computers, etc. Students need to learn to use and master a variety of online course resources for autonomous learning. At present, the online learning platform mainly includes Tencent classroom, Tencent Conference, Zoom Conference, Ding Talk, MOOC, Rain classroom, QQ Group, the school's own platform (such as: Liru online courses), as shown in Figure 1.

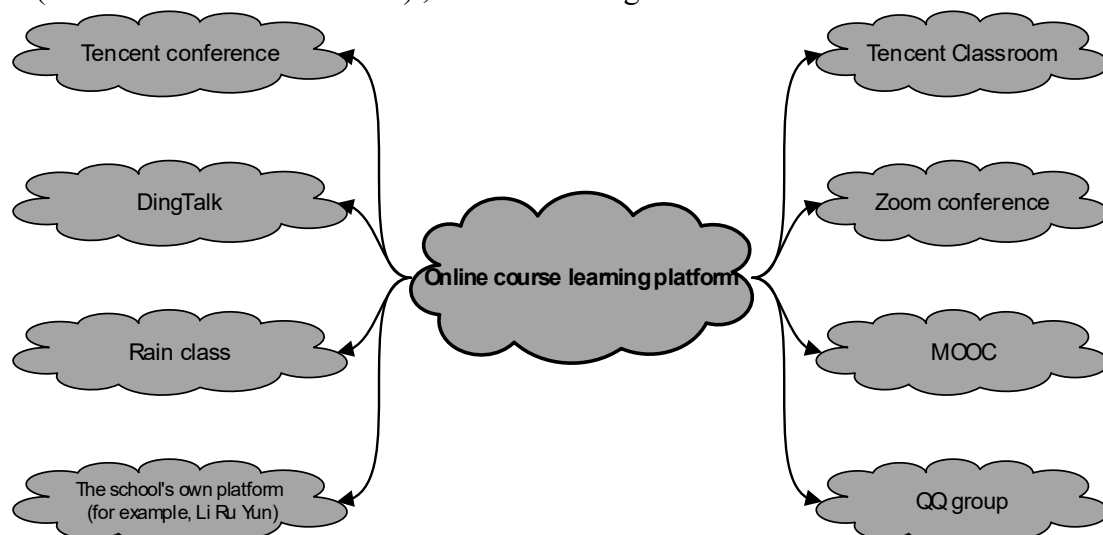


Figure 1 The online course learning platform by college students

As far as teaching forms are concerned, online teaching is the basic teaching form of offline teaching. However, due to various constraints such as the level of science and technology and the family conditions of students, it is still impossible to carry out distinctive and interesting teaching activities like offline teaching. Online teaching is a kind of teaching with the help of Internet platform and information technology, which is obviously different from traditional offline teaching. Teachers and students communicate with each other through the screen, which leads to limited teaching environment, limited teaching tools and unstable teaching conditions. In online teaching, students are in a relatively relaxed environment, which is conducive to activating classroom atmosphere and stimulating active thinking. In the process of teaching, teachers also need everyone's feedback and help. Therefore, active interaction with teachers can not only help you to ease your confusion, but also enable teachers to grow up with you.

2.2 Methods of online teaching

Because the organization and implementation of online teaching in colleges and universities started late, the management of online teaching in colleges and universities has been explored, and the system is not perfect, the system is not mature enough, and the implementation is not in place. In the face of teachers and students scattered all over the country, it is necessary to carry out online teaching in an all-round way, how to quickly communicate the overall arrangement of online teaching in schools to teachers, and how to establish communication channels between teachers and students, which are all practical problems that college teaching management departments need to face. Up to 2014, the network teaching nearly all colleges and universities throughout the country, high-quality network teaching resources provide a rich means of teaching for college teachers. With the continuous investment of network infrastructure in universities all over the country, especially in the context of the rapid spread of mobile network, the strong coverage of the Internet has provided a strong guarantee for the smooth implementation of network teaching in universities. However, there are still some problems in the current network teaching, such as insufficient attention, imperfect teaching evaluation mechanism and insufficient teaching interaction. For example, teachers mainly through the Wechat group or QQ group way assignments, interaction and feedback with students. By means of live video broadcast, live voice broadcast, recording and playback, multimedia courseware, chat room and so on [11]. Most colleges and universities are still learning from the practice of offline teaching management, few schools can really implement innovative management. As far as learning effect is concerned, offline teaching is more time-effective, while online teaching requires students to have a certain sense of autonomy. On the other hand, teachers and students can communicate directly with each other when any problems arise in the offline learning process. Figure 2 is the teaching form of the network course

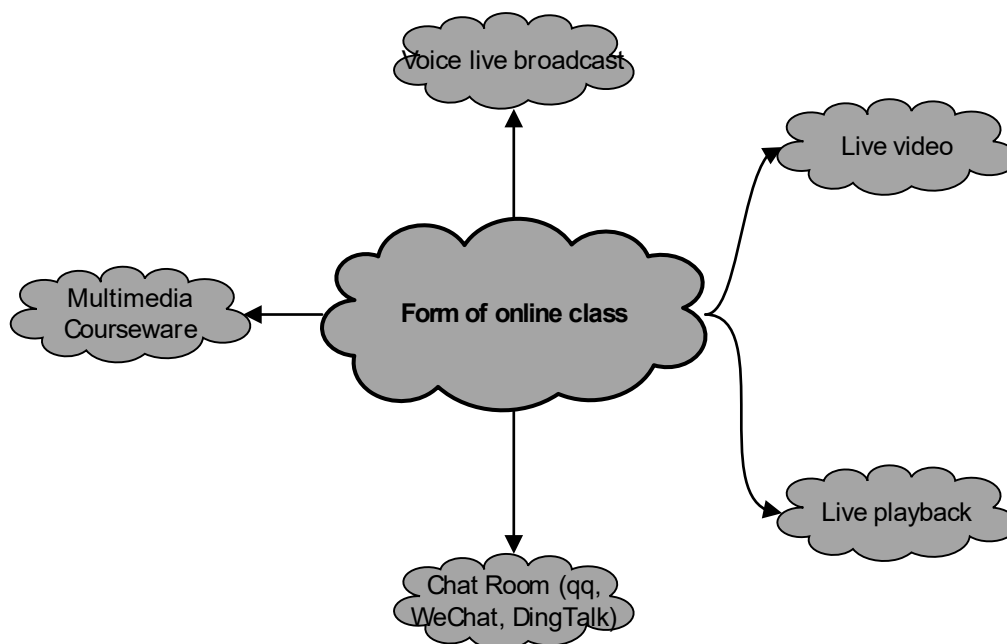


Figure 2 The major teaching form of the network course

In order to better carry out teaching and learning and improve teaching quality, many colleges and universities are constantly trying the mixed teaching mode, that is, taking offline classroom as the mainstay, supplemented by online teaching, and organically integrating face-to-face teaching and online teaching. The educational administration department of colleges and universities, together with the teaching supervision departments and teaching units, inspect and supervise online teaching, and solve and feed back the problems found in the inspection. Finally, the educational administration departments of colleges and universities organize all teachers who participate in online teaching to evaluate their courses. In the process of online teaching practice, teachers often try to think the most suitable teaching mode according to the curriculum, students, actual environmental conditions and supportable hardware conditions, and through continuous exploration and feedback from students, timely adjust and improve, find out their own teaching mode with unique style and characteristics and popular with students. In the “Internet +” environment, students can acquire fragmented knowledge through the internet anytime and anywhere, which shows the convenience of network resources. However, long-term study of fragmented knowledge is not conducive to the cultivation of students’ logical thinking, in addition, the short-term relevance of knowledge will be limited, which will bring severe challenges to the learning effect of students. At the same time, students in the process of self-study will be tempted by the network entertainment information, distraction, students can not focus on learning.

3. Satisfaction analysis of online classroom

Higher education is to train qualified industry research talents, management talents and technical talents for the society, pay attention to the cross-training of knowledge, ability and quality, with ability as the key, quality as the guarantee and knowledge as the foundation. During the period of epidemic prevention and control, all online teaching platforms share teaching resources free of charge, which provides resource support for the implementation of online teaching. Online teaching is different from offline teaching. In the process of offline teaching, teachers and students face to face, and every move of students is exposed under the eyes of teachers. Online teaching is an important teaching mode reform and innovation for most teachers. Online teaching under the epidemic situation has forced the reform of education and teaching, and the auxiliary teaching platform has been greatly developed. The future classroom teaching mode will tend to adopt the mixed teaching mode. Teaching monitoring in colleges and universities is mainly composed of two levels, namely, colleges and departments. The number of personnel is mainly part-time, so it is not a big problem to deal with

a small amount of online teaching, but it will be inadequate to implement large-scale online teaching monitoring.

Teachers can throw out different topics to discuss with students during and after class, make process evaluation through interaction frequency and speech quality, use platform data to understand and judge students' learning effect, and adjust teaching methods and contents in time according to students' feedback after class. The interactive relationship of students' social development is shown in Figure 3.

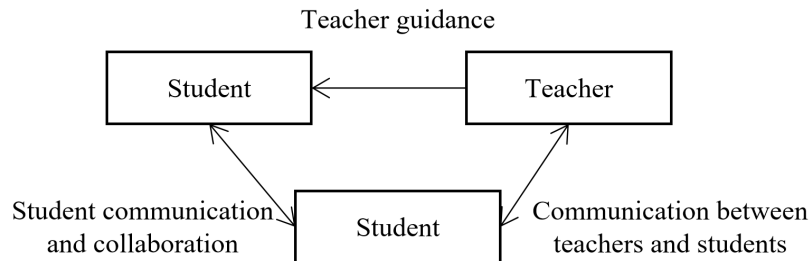


Figure 3 Interactive relationship between students' social development

In the process of online teaching practice, there is a clear gap between students with weak autonomous learning ability and students with strong autonomous learning ability in knowledge absorption and digestion. We must strengthen the construction of online courses for Chinese college students, constantly improve the learning system of college students participating in online courses and build an efficient online classroom governance system in colleges and universities. Figure 4 is a path analysis model of university online classroom environment construction dimension and learning effect.

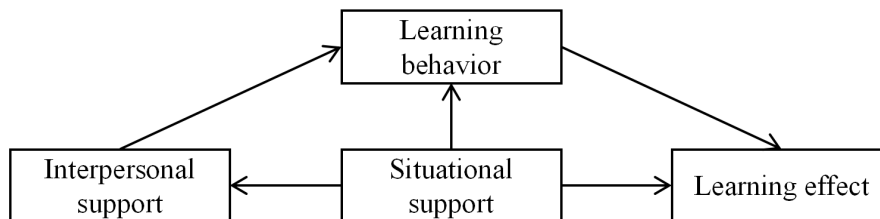


Figure 4 Path analysis model

The survey shows that most teachers recognize the novelty and interest of online teaching, but they also generally think that online teaching consumes more time and energy in preparing lessons than offline teaching. In online teaching management, because the situation of teaching monitoring is more complicated, more monitoring power is needed. With teachers' careful preparation and full commitment, students actively cooperate with teachers' teaching tasks to carry out various forms of autonomous learning, and quickly adapt to the new teaching mode, and the learning effect exceeds expectations [12]. The active degree of college students' participation in online learning mainly depends on the quality of teachers' input, so the key to college students' online learning lies in the strength of teachers' input in online learning. This shows that there are many ways for college students to participate in online learning, but the satisfaction of college students participating in online learning service also affects their willingness to participate in online learning. Compared with teaching students professional knowledge, it is more urgent to consciously strengthen the cultivation of students' autonomous learning ability. Because only with the ability of self-study, can we purposefully obtain effective information in the vast learning resources and make use of it for processing, analysis and innovation.

4. Conclusions

The research on satisfaction of online courses in colleges and universities during COVID-19 epidemic has its particularity, which reflects the real and more representative problems. During the COVID-19 epidemic, colleges and universities should emphasize the adjustment of the time for college students to participate in online courses, which is in line with the vital interests of the majority

of students, reform the system and mechanism of online course participation, and promote the further deepening and reform of online teaching system in China. The epidemic has brought us crisis and challenges, and at the same time, it has given us new opportunities for development. It may help us to improve the coping ability of public health mechanisms and promote new ways of life and learning. Teachers are the designers, organizers and leaders of educational activities, and play a leading role in the educational process. Facing the sudden situation of online teaching during the epidemic, teachers should make full preparations for online teaching. As far as learning effect is concerned, offline teaching is more time-sensitive, while online teaching requires students to have certain consciousness. Compared with teaching students professional knowledge, it is more urgent to consciously strengthen the cultivation of students' autonomous learning ability. Because only with the ability of self-study, can we purposefully obtain effective information in the vast learning resources and make use of it for processing, analysis and innovation.

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