College Students' E-learning Quality Influencing Factors and Improvement Strategies

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Abstract. After the outbreak of Covid-19, in order to avoid the impact of the epidemic on teaching and learning activities, educational institutions around the world are trying to leverage the internet to make extensive use of numerous technological tools such as computers, tablets, cell phones，and the Internet for education. In recent years, colleges in China have commonly adopted E-learning or blended teaching methods to class teaching, which have played an important role in the normal development of teaching. E-learning, also known as online learning, has many advantages, but there are some problems in the process of carrying it out. It is necessary to analyze the influencing factors of E-learning quality and propose improvement strategies. The results of the study show that teacher's behavior, classroom atmosphere, E-learning condition, and Teaching Courseware all have an impact on students' E-Learning quality. The study proposed improvement measures in terms of teachers, environment, teaching platform, and teaching resources.

Keywords: E-learning quality, College Students, Online teaching.

1 Introduction

E-learning is a form of learning that takes place with the help of digital technology and involves the Internet and other software and hardware technologies for effective two-way communication between teachers and students [1]. E-learning platforms extend the learning process beyond the classroom, allowing students to complete their learning at any place and at any time [2]. Since the epidemic of Covid-19, the use of E-learning platforms to maintain normal teaching and learning was actively explored around the world in order to avoid prolonged school closures that would disproportionately affect the school process. Today, E-learning still plays an important role in college teaching in China, and traditional offline teaching is gradually being integrated with E-learning. This study analyzes influencing factors for the quality of students' E-learning from several perspectives and suggests strategies after studying relevant literature and considering teaching experiences.

2   Influencing Factors of College Students' E-learning Quality

2.1   Teacher's Behavior

Teachers are another important category of participating members in the classroom besides students [3]. Teachers' encouragement, evaluation, different teaching styles, and instructional design all have an impact on students' E-learning quality. In the interview, students stated that the teaching style of the teacher had the greatest influence on the quality of their learning and that the more creative and diverse the teacher's teaching methodology, the better the quality of the student's learning. On the other hand, if teachers get along well with their students, the learning atmosphere is harmonious and students respond with enthusiasm for learning. The more the teacher affirms and supports students in the classroom and makes them appreciate these behaviors, the more actively students will engage in the learning, increase their emotional involvement in the classroom, and thus make progress in the E-learning quality.

2.2   Classroom Atmosphere

In general, students in the interviews claimed that when they study online, they can still feel less classroom atmosphere. Some students find it difficult to pay attention in class all the time because the learning environment in an online class lacks the atmosphere of a typical classroom [4]. Encouragement from peers, respect for one another, and a supportive environment in the classroom all help students integrate better, improve their focus while learning, and improve their learning outcomes, all of which are crucial and required for enhancing the quality of their online learning [5]. Poor relationships between students and between teachers and learners in the classroom are one of the key causes of students' poor learning quality. Students have to understand they are an essential and essential component of the class community and that everyone is connected rather than isolated from one another for their learning to be more effective [6][7]. Each student can learn about the sense of duty and purpose that come with being a part of the class when they are given teaching tasks, which will improve the standard of the online course.

2.3   E-learning Condition

It can be difficult for some students to interact with other students online since they have limited internet access and often lose connections in class. Additionally, the E-learning platform will have a direct impact on the learning abilities of the pupils. Different online class platforms differ from one another. It can be challenging for students to communicate with teachers and express their ideas on some E-learning platforms because they only have live-streaming capabilities. Some other platforms are designed for online meetings or chatting, they are short of learning and teaching functions, such as live replay, sign-in check-in, correct homework, ask questions after class. What's more, Students now frequently study on their cellphones, but since most

E-learning platforms were created for computers, they feel that the font is too small to see on a phone.

2.4   Teaching Courseware

As the result from Qing Lan's (2015)research, courseware is becoming more and more closely integrated with classroom teaching [8]. In offline classrooms, teachers usually use courseware to present teaching content, provide learning ideas and enrich teaching tools. In online teaching, courseware occupies most of the screen space, and the quality of courseware has a greater impact on students' learning experience than in offline classrooms. According to students' feedback, teachers commonly use the same courseware in online and offline classes. In online teaching classrooms, teachers and students involved in the same teaching activity are not in the same place, and courseware becomes an important bridge between the two subjects. The interactivity and richness of the courseware directly affect the learners' understanding of what they have learned. According to student feedback, there is no difference between the courseware used by teachers in offline and online classes. Although the courseware contains text, pictures, and audio. However, these modalities are not combined and cannot well form a complete communicative scene, lacking communicative and interactive functions.

3   E-learning Quality Improvement Strategies

3.1   Adjusting Teacher's Teaching Behavior

Teachers must clarify the difference between online and offline classes before designing the E-learning teaching methods. In the online classroom, the teacher cannot face the students directly, so the online classroom teaching is different from the actual classroom. First of all, every aspect of teaching cannot be reflected to the teacher in the first instance by observing the students' acceptance of the teaching effect. Secondly, it is hard to adjust the pace of teaching according to students' real-time performance, which may lead to unreasonable speed and priority, and eventually affect the effect of students' participation in class [9]. Teachers have to design a course according to the characteristics of the E-learning platform, and not directly apply the offline teaching model. In addition, the teaching order of the course knowledge points should be rearranged, and the basic knowledge points should be given priority in online teaching [10]. Teachers can provide clear explanation videos for the harder-to-understand concepts or search web video resources in preparation and give them to the students.

3.2   Creating a Good Classroom Environment

Concern and support among classmates play a very important role in the class emotional environment. Students should encourage their classmates, be friendly and con-

tribute to creating a good E-learning mental environment. Teachers should pay attention to how students feel when they are learning online and use the value of the interactive feature view of the E-learning platform to make students feel that their performance is being noticed [11]. Students who are more socially supported are more willing to study online, they feel more valuable and cared for by many people, their learning attitude is more positive and active, and their learning quality improves. If teachers are lively and caring in the class and agree with students' behavior, they can gain students' full trust in the class, build a harmonious teacher-student relationship together, show tolerance for students' mistakes, and use reasonable ways to deal with conflicts that occur in the learning process, so that students will be relaxed to answer questions and engage in learning activities in the class and cooperate with teachers to achieve high-quality E-learning.

3.3   Choosing a Suitable Management System

Teachers should pay attention to the convenience of students using the platform when choosing the platform. While some E-learning platforms have many functions, they can be difficult to use. Such platforms frequently have high-quality network and hardware needs. The interview shows that nearly half of the students use cell phones to take an online class. The small cell phone screen and constrained operation interface make it challenging to do sophisticated operations. Students' learning quality in online class will be significantly decreased if teachers use such a platform [11]. So that students can participate in class learning as soon as they are skilled in platform operations, teachers should aim to select simple and user-friendly platforms and concentrate teaching tasks on one or two platforms [12].

3.4   Make Good Use of the Courseware

In offline teaching, teachers usually share a small number of teaching resources in the classroom through courseware due to the limitations of classroom hardware or network conditions. Nowadays, in online teaching, teachers and students can discover more use for the courseware. Students can also use the screen sharing function to operate courseware or other learning resources on their own devices. Teachers should give full play to the advantages of the Internet when teaching online, and collect audio, video, and graphic web materials according to teaching requirements to enrich students' online courseware and promote the smooth development of online teaching activities. As for the courseware design in online teaching, attention should be paid to whether the font size of the courseware is suitable for students' mobile devices, and the design of the courseware should focus on enriching the form of exercises and on the communicative function of the courseware [13].

4 Conclusion

Teachers for E-learning classes have a pressing need for practical ways to increase students' learning quality. Because students' learning state in online classrooms is more difficult to know than it is in offline classrooms. Various factors influence students' E-learning quality. It is the teacher's duty to figure out the influences and take effective measurements. Teachers should carefully adjust the teaching behavior, build a suitable environment, select the platform and make good use of internet resources to increase the quality of E-learning.

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