

Investigation and Analysis on the Fragmented Learning Status of College Students under the Background of Online Learning

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Abstract

This paper aims at the problems of low efficiency and poor quality of college students' online courses, and makes a questionnaire survey on the influencing factors of college students' online course learning quality. According to the survey results, the factors that affect the learning quality of college students' online courses are divided into four dimensions: platform design dimension, curriculum design dimension, students' self-management dimension and hardware support dimension. Through the analysis of the survey data, we can understand the present situation of college students' fragmented learning and get the factors that affect the quality of college students' fragmented learning, and finally put forward relevant strategies to improve the learning quality of college students' online courses.

Keywords: Online courses, fragmented learning, strategy research.

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INTRODUCTION

The concept of fragmentation first appeared in the academic research of postmodernism in the 1980s, which means that the perfect things should be divided into several pieces, but with the development of science and technology and the times, fragmentation is in political science and economy. Education and many other fields have been widely used. Fragmentation learning is an extension of the concept of "fragmentation" in pedagogy. It means that learners use a new way of thinking to extract meaningful knowledge fragments from the network, store, process and internalize these knowledge fragments. Then scattered knowledge is integrated into the existing knowledge structure of individuals. Fragmentation learning is one of the forms of informal learning.

In the era of continuous development of information technology and social economy, people's life, study, and work are accelerating. The use of multiple smart terminals has changed people's lifestyles and improved the efficiency of study and work. In this case, People's time fragmentation is becoming more and more serious, the complete time that people can control is also less and less, and the scattered time is more and more. Therefore, in a limited and fragmented time, high-efficiency, fast-paced, and large-capacity learning

has gradually become a trend. Nowadays, the use of information technology in college teaching is becoming more and more extensive. At the same time, under the impact of the massive information on the Internet, the learning style of college students has also undergone great changes, and modern higher education has also put forward new requirements for their learning ability.

Today's college students are mostly born in the 90s and 00s. Because they have lived in the digital age since they were young, they are familiar with and frequently use various electronic products. Most college students generally use search engines and online news to obtain information; communicate through WeChat, Weibo, and email; and use music, videos, and games for leisure and entertainment. The Internet is closely related to the study, entertainment and life of contemporary college students, and college students are increasingly dependent on the Internet. At the same time, contemporary college students have strong learning ability, are easy to accept new things, and have a certain ability to innovate. In addition, due to the diversification of learning equipment and learning media, and the comprehensive coverage of the network, they have created conditions for them to learn without time and place. In addition, the learning environment of college students is relatively relaxed and open, and the schedule of courses is relatively flexible. College

students have relatively more free time to use. Therefore, in the Internet age, college students are becoming loyal participants in fragmented learning. College students have gradually developed fragmented study habits and abilities.

Based on the analysis of research on fragmented learning at home and abroad, Zhu [1] defined the concept and characteristics of fragmented learning, and proposed corresponding strategies from the three levels of college students, teachers and universities to optimize the effect of fragmented learning for college students, teachers and universities, so that fragmented learning becomes an effective supplement to traditional learning methods to truly maximize the effectiveness of fragmented learning. Regarding the influencing factors of fragmented learning of college students, Gao and Xu [2] only studied the optimization strategies of fragmented learning of college students under the Internet background, without specific analysis of its influencing factors. Zhu and Geng [3] discussed the fragmented learning of college students in the Internet era. The influencing factors and their effect improvement strategies are analyzed, and it is not analyzed whether the influencing factors are related to the quality of fragmented learning; Li [4] analyzed the application of fragmented learning in online courses; Liu [5] according to its fragments Influencing factors of modernized learning, investigate and analyze the current learning situation of college students' online learning; Wang Taotao evaluates and studies the learning effects based on online courses of learning analysis, and applies learning analysis and big data mining technology to screen a large number of college students' online courses And analysis, the final results are digitized, and the core indicators for evaluating students are determined [6]. Li et al., [7] analyzed the influencing factors of college students' online learning ability. In these existing documents, it is rare to use mathematical methods and models to analyze the influencing factors of fragmented learning of college students based on online courses.

In the paper, an empirical analysis of factors influencing the learning quality of college students' online courses is conducted through questionnaire surveys, and the status of college students' fragmented learning is understood. As a result, targeted suggestions are put forward from the levels of students, teachers, and course platform.

RESULTS AND DISCUSSION

In order to understand the current fragmented learning situation of college students, this article conducted interviews with surrounding students and teachers, and formed the final questionnaire using the "questionnaire net". From September to October 2019, questionnaires were distributed to students of various majors in various colleges and universities through the

questionnaire network platform. The main contents of the questionnaire included dimensions that affect the fragmented learning of college students: platform design dimensions, curriculum design dimensions, and student self-management Dimensions and hardware support dimensions. A total of 120 questionnaires were issued and 120 valid questionnaires were returned. The questionnaire response rate was 100%. Among the survey subjects, boys accounted for 25.83% and girls accounted for 74.17%.

For contemporary college students, the ways and means of acquiring knowledge have been transformed from the traditional method of relying solely on classroom narration to the mode of fragmented learning. Among the 120 people surveyed, college students' understanding of fragmented learning and participation in more than 5 fragmented learning courses accounted for 65%, 3 to 4 courses accounted for 18%, and 1 to 2 courses accounted for 14%. 3% of college students have never participated in the Internet.

Reasons why college students choose or not to choose fragmented learning

Among the 120 people surveyed, 76.7% chose online courses because of the rich content of online courses, 68% chose the reason for the fast download of learning materials and easy learning, and 45.8% of them chose online courses. The course module structure is clear and fragmented learning is chosen, but only 36% of people choose fragmented learning because of the clear navigation of online courses (see Figure -1).

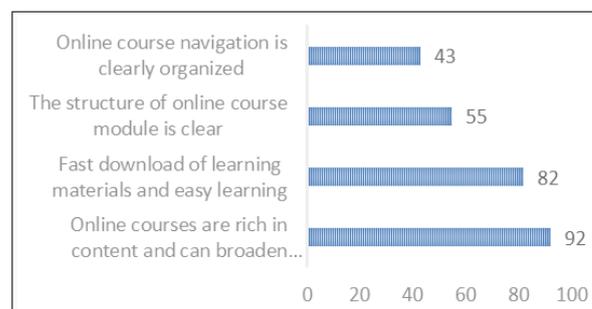


Fig-1: Reasons for choosing fragmented learning methods in online classrooms

Fragmented learning has developed to a large extent, but there are also some problems. Among the 120 people surveyed, 37% did not choose fragmented learning due to poor personal initiative, and 28% did not choose it. Because the network conditions and equipment are not good, and the classroom atmosphere is not positive and the content of the course is not clearly classified, the fuzzy definition affects students to choose fragmented learning.

When studying the factors that affect the quality of college students' online courses, we divide them into four dimensions: platform design dimensions, curriculum design dimensions, students' self-

management dimensions, and hardware support dimensions.

From the perspective of curriculum design, 76.67% of students believe that the richness of learning resources will affect their fragmented learning, while 75% of students believe that online learning goal-oriented is the main factor affecting their fragmented learning. 58.33% of students believe that online teaching tests can help consolidate students' learning, and 45.83% of students believe that clear course sections are the main factor affecting their online course learning. In addition, there are clear course navigation regulations, various forms of learning materials, and learning materials that meet the learning needs of students will affect students' fragmented learning (see Figure-2).

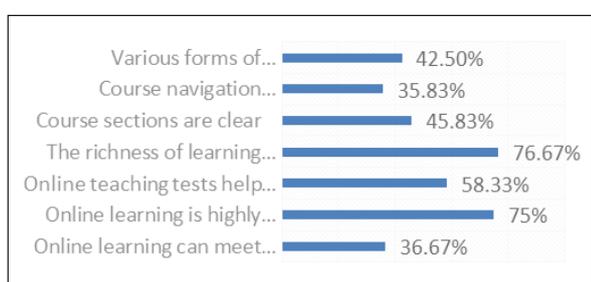


Fig-2: The proportion of influencing factors of curriculum design dimension

Influencing factors of fragmented learning of college students

From the perspective of platform design, 60.83% of students believe that the high interactivity of platform design will affect their fragmented learning, while 60% of students believe that teachers' mobilization of classroom atmosphere and interaction can help improve learning effects and affect their fragmented learning major factor. Another 59.17% of students think it is convenient to complete homework on the online learning platform, and 58.33% of students think that the reasonable setting of platform learning tests is the main factor affecting their online course learning. In addition, students' participation in interaction and their initiative, teachers' active guidance in learning, and simple platform operations will affect students' fragmented learning.

From the perspective of learners' self-management, 44.17% of students believe that the reasonable schedule of online learning is a factor that affects their fragmented learning, and 44.17% of students believe that the reasonable schedule of online learning is the main factor affecting their fragmented learning. There are also 36.67% of students believe that the completion of online homework affects their fragmented learning.

From the perspective of hardware support, 68.33% of students believe that the fast download speed of online learning materials is a factor affecting their

fragmented learning, while the remaining 49.17% of students believe that a good online network is a factor affecting their fragmented learning.

Looking at the 20 factors in the four dimensions selected by the questionnaire, it can be seen that the online learning goal-oriented and rich learning resources in the curriculum design dimension, and the fast download speed of learning materials in the hardware support dimension account for the highest proportion. Therefore, these three factors are the main factors that affect the fragmented learning of college students; the platform design in the platform design dimension is highly interactive, the teacher can mobilize the classroom atmosphere and the more interactive the more it helps to improve the learning effect and learners' self-management dimension. The reasonable proportion of online learning arrangements in China is relatively high, so the four factors are selected as secondary factors; the remaining factors account for a relatively low proportion and are not considered here.

Strategies for improving the fragmented learning of college students

Fragmented learning is becoming more and more common in our lives. It can learn anytime and anywhere, breaking through the limitations of space and time. However, there are still various problems in fragmented learning. Most of the learning knowledge in fragmented learning is presented in the form of fragments, with a low degree of integration, which affects the learning effect of learners to a certain extent. In order to improve the quality of fragmented learning of college students, it needs to be improved.

1. Set up scientific and reasonable course arrangements. The learning of online courses requires interactive learning between teachers and students. Teachers should actively stimulate students' interest in learning when they broadcast the courses. Some students may not concentrate during the teacher's lecture. Therefore, the teacher should set a more reasonable amount of courses in the course of lectures, so that students can grasp and understand and apply the knowledge taught by the teacher's courses, instead of the teacher alone speaking more knowledge points, and the students have not mastered the knowledge. To achieve high-quality online learning, not only the teacher's patience and reasonable arrangement of the amount of courses, but also more time for students to think about what they have learned and deepen the impression, and finally make the two reach a height of integration.
2. Create a simple platform. The design of the online course platform should be as simple and understandable as possible, in line with the technical level of most students, and avoid the phenomenon of students abandoning classes due to technical problems who will not use the courses

on the platform. Therefore, the platform can be tried out before the course is issued. The platform can be simplified and improved through the trial conditions and feedback of the trial users, and the network professionals can also be taught to design more optimized platform courses that are more in line with the technical level of modern students, thereby increasing the utilization rate of the platform courses by students.

3. Strengthen the interaction between teachers and students. Teachers play an important role in the quality and effectiveness of students' participation in fragmented learning. Generally speaking, with the help and guidance of teachers, college students can better participate in it, which can further improve the quality of learning. In the interactive work, you can choose the teaching software APPs such as DingTalk, Xuetong, Tencent Meeting, etc. to communicate and interact in voice, text, live broadcast or video. Before the course starts, teachers can send learning materials to students through QQ, WeChat and other contact tools to clarify the content and progress of the course and help students quickly enter the state during class. During class, teachers can use audio, video and other learning resources to conduct situational teaching, while also allowing students to participate in teaching activities. Fully interactive exchanges between students and teachers improve students' enthusiasm and participation. After class, teachers can solicit opinions from classmates, and further reflect on their own teaching through students' comments after class.
4. Cultivate learners' self-control ability. Short-term fragmented learning mainly uses mobile phones and iPads as tools, while longer-term learning uses computers as learning tools. For some college students, their level of self-control is low, and after using learning tools to study for a period of time, they will unconsciously play with learning tools such as mobile phones. Attention appears to be slack, and learning cognition begins to appear biased, which will lead to poor quality and low efficiency in fragmented learning. For the above phenomena, college students should improve their own learning attitude and learning ability for online learning, and at the same time guide them to establish a correct learning attitude, find a learning method that suits them, and further improve their learning efficiency in online learning. The design of the online course platform should be as simple and understandable as possible, in line with the technical level of most students, and avoid the phenomenon of students abandoning classes due to technical problems who will not use the courses on the platform. Therefore, the platform can be tried out before the course is issued. The platform can be simplified and improved through the trial conditions and

feedback of the trial users, and the network professionals can also be taught to design more optimized platform courses that are more in line with the technical level of modern students, thereby increasing the utilization rate of the platform courses by students.

CONCLUSION

In summary, in the context of the rapid development of the Internet, the effect of fragmented learning for college students is affected by various factors, and good learning effects cannot be guaranteed. Based on the analysis of the status quo and influencing factors of fragmented learning of college students, this article proposes that to improve the effect of fragmented learning of college students, college students need to have a correct attitude, improve their self-consciousness and self-control, and teachers need to provide effective guidance and support. At the same time, schools need to provide a good online learning environment and platform.

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