

Problems and Optimization Strategies of College Students' Fragmented Learning under the Background of New Media

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Abstract

Fragmented learning is an inevitable result of human society entering the new media era. It is a new way of learning and plays an important role in the development of future education. However, there are also some problems in fragmented learning. How to give full play to the advantages of fragmented learning and avoid its shortcomings, how to systematize the knowledge of fragmented learning, and how to optimize the effectiveness of fragmented learning have become the current research focus of fragmented learning. On the basis of studying the existing fragmented learning theories, this paper understands the current situation and existing problems of college students' fragmented learning, and proposes optimization strategies for college students' fragmented learning from three perspectives: college students, teachers and colleges.

Keywords

New Media; Fragmented Learning; College Student; Strategies.

1. Introduction

With the rapid development of science and technology, various new media have begun to emerge in an endless stream, such as WeChat, Douyin, Kuaishou, etc., as well as a variety of learning software, micro-videos, micro-classrooms and other teaching resources that allow people to learn freely. Coupled with the gradual fragmentation of learning resources and time, fragmented learning methods emerge as the times require.

The rapid development of new media provides an important medium for fragmented learning to acquire, disseminate and share knowledge. Scattered knowledge has gradually become one of the important factors for college students to acquire new knowledge.

As a college student in the new era, he is the implementer and disseminator of the fragmented learning method. On the one hand, fragmented learning is more network-oriented, and college students can obtain massive resources in real time. It has become an important means for college students to acquire knowledge.

2. Research Status at Home and Abroad

2.1. Domestic Research Status

In China, most of the research on fragmented learning starts from the existing disadvantages of fragmented learning, and proposes optimization strategies.

Zeng Fanmei and Wei Yan put forward the phenomenon that is not conducive to learners' comprehensive learning, and built a problem-based fragmented learning model, that is, learners are dominant, learners are the main body of learning, and learners' problem-solving and life-long learning ability is cultivated [1]. On the basis of expounding the necessity of deep learning in the current Internet environment, scholars such as Chen Lin and Li Fan discussed how to carry out deep learning, and summarized seven learning strategies to achieve the

purpose of deep learning [2]. Wang Hui, Wang Dan, and Zhang Tiangong believe that the reconstruction of fragmented knowledge should be completed through knowledge recovery and reconstruction, so as to improve the fragmentation of learners' thinking and cognition caused by fragmented learning, and realize fragmented learning. Effective application in system learning [3]. Huang Jianfeng proposed that fragmented learning is a temporary and temporary learning mode. It is a learning method that allows learners to absorb knowledge at any time, in any space, and in massive network learning resources through full-coverage wired or wireless networks and modern intelligent mobile terminals in the Internet+ era [4].

2.2. Current Status of Foreign Research

Foreign research on fragmented learning originated from the research on mobile learning (Mobile learning) or digital (E-learning), and foreign research on fragmented learning mainly focuses on practice, and has achieved remarkable results at the application level [2].

Regarding the definition of fragmented learning, some foreign scholars have elaborated from different perspectives. Clark Quinn defines mobile learning from a technical point of view [5]: Mobile learning is digital learning through IA devices, including Palms, Windows CE devices, and digital mobile phones [6]. The definition given by Paul Harris is: Mobile learning is the intersection of mobile computing technology and E-Learning, which can bring learners a learning experience anytime, anywhere [7]. According to Alexzander Dye et al., mobile learning refers to learning with the help of mobile devices at any time and anywhere [8]. The mobile devices used in mobile learning can fully present the learning content and realize two-way communication between teachers and learners [9].

From the reviews at home and abroad, we can know that fragmented learning is closely related to mobile learning and distance learning [2]. At present, most researches on fragmented learning at home and abroad focus on learning resources, environments and platforms, and there are few studies on learning status and learning effects. Therefore, in order to make learners have a more comprehensive and profound understanding of fragmented learning, it is necessary to base on the current situation of fragmented learning, so that more learners can master the fragmented learning method.

3. Explanation of Related Concepts

3.1. An Overview of the Relevant Theories of New Mediasub-section Headings

3.1.1. New Media Concept

For the concept of new media, so far there is no unified conclusion. Most of them agree with the view that new media refers to the mobile Internet and other interactive digital media composed of network media, mobile phone media and other technologies, also known as the fifth media [10]. The newness of new media is not only reflected in the newness of technology and form, but more importantly, it reflects the newness of theory. We should understand it in depth from the perspective of development.

3.1.2. Characteristics of New Media

The characteristics of new media are as follows:

(1) Personalization. New media provides users with an information dissemination platform for self-expression and mutual exchange. New media users can freely express their ideas [11], upload various audio and video, and disseminate the information they care about on Weibo, Zhihu, Bilibili and other websites without violating national laws and regulations. The content, form, and time of sharing are entirely up to you, giving full play to your individuality and not being restricted by others.

(2) Interactivity. New media can meet the needs of interactive expression, entertainment and information anytime, anywhere. People can get any information they need anytime, anywhere. People can communicate and interact through Internet TV, mobile phones, computers and other devices.

(3) Image sex. Compared with traditional media, new media is richer and more comprehensive in disseminating information content, integrating text, pictures, audio, video and other information forms into one, presenting multimedia and very strong image. New media users can freely download, copy, trim, delete and restore various information, and can also save it for a long time [11].

(4) Diversity. New media disseminate information in many forms. New media is undoubtedly the master of the form of information expression. Text, pictures, charts, animations, sounds, and videos are all forms of expression and information transmitted by new media [12]. The communication forms of multimedia are diverse. The combination of various communication forms makes the communication of information more vivid and attractive. At the same time, its significance is enhanced, and it can also take into account the likes of various audiences.

Swiftness. With the rapid development of network technology and multimedia technology, new media can realize real-time transmission of information, that is, information including text, graphics, audio, and video can be transmitted very quickly and easily without all complicated links [11]. New media is a very simple platform for publishing and receiving information. This bidirectional, interactive and non-linear transmission enables a variety of information to be transmitted between new media in real time.

3.2. Overview of Fragmented Learning Related Theories

3.2.1. The Concept of Fragmented Learning

At present, there is no unified conclusion on how to define fragmented learning. This paper summarizes the concept of fragmented learning by reviewing and sorting out relevant literature:

Wang Mi believes that fragmented learning refers to a learning method in which learners have certain learning needs and learn fragmented knowledge based on learning needs by learning media and fragmented time [13]. Zhu Zhiting believes that fragmented learning is initially due to the fragmentation of network information, which will lead to knowledge fragmentation and time fragmentation [14]. Wang Zhuli believes that fragmented learning means that learners acquire relevant knowledge through network media at irregular time and place according to their own knowledge needs, so as to improve their comprehensive ability and acquire knowledge in an intermittent way [15]. Huang Jianfeng believes that fragmented learning is a convenient learning method that learners can use at any time in their daily lives. In the ubiquitous learning environment, learners can acquire knowledge at their fingertips, and reconstruct and process it to form a new knowledge system for the actual needs of learners [16].

Combining the viewpoints of various scholars, we can find the concept of fragmented learning. Most of them emphasize the fragmentation of knowledge and time. Fragmented learning can be understood as the use of mobile devices in fragmented time in daily life for learners to learn independently, a way of learning to acquire knowledge.

3.2.2. Features of Fragmented Learning

(1) Fragmentation of learning time

In one day, in addition to completing specific studies and work, our time is fragmented. We can use this fragmented time fragment to do different things, such as time for bus rides, time for bedtime, time for meals, etc., using mobile phones, Smart devices such as tablet computers

conduct fragmented learning. Optimize your fragmented time and make full use of limited time to accomplish more things.

(2) Fragmentation of learning content

With the rapid development of new media, different knowledge is disseminated in a fragmented form through carriers such as Douyin, WeChat, Weibo, and various learning software. The resources people acquire are no longer systematic, but gradually tend to be fragmented. At the same time, due to the fragmentation of time, people divide what they have learned into different knowledge blocks, and use the fragmented time to learn, so that the content of learning is fragmented.

(3) Fragmentation of learning thinking

In the information age, when learners face massive information resources, they no longer learn with traditional thinking, but solve problems with innovative thinking. Their thinking is fragmented, and learning tends to be fragmented. When dealing with fragmented knowledge, it is necessary to form systematic thinking, find problems in fragmented learning, and prevent fragmentation of thinking. After fragmented learning, it is necessary to summarize and organize in time to build your own knowledge framework. Transform fragmented knowledge into systematization to form a complete knowledge system.

(4) Fragmentation of new media

With the help of intelligent learning terminals such as electronic textbooks, mobile phones, tablet computers and the Internet, new media provides animation, text, video, network and other learning services to college students, so that college students' learning is no longer boring, enriching the learning environment of college students, and overcome the traditional The limitations of time and space in learning methods [17]. The resources and information carriers are diversified, and learners can choose and use various learning media independently. New media technology has enriched the learning environment and learning methods of learners to a large extent, making people's learning more personalized and the learning process more interesting.

4. Problems Existing in Fragmented Learning of College Students

4.1. Subjective Question

(1) Self-discipline is not strong and is easily disturbed by the external environment

Due to the relatively free time and content of fragmented learning, there are high requirements for learners' self-discipline. Students with poor self-discipline are likely to be attracted by other information on the mobile network platform, resulting in low learning efficiency [15]. It is necessary for learners to process and organize the fragmented knowledge they have learned into their own knowledge system. In this process, there is little teacher participation, which has higher requirements for learners' learning ability. Therefore, this learning method will polarize the learning effect of learners to a certain extent. The learning effect of learners with good self-discipline ability is better, while the learning effect of learners with weak self-discipline ability is even less ideal.

(2) Fragmented learning objectives are not clear

Fragmented learning requires a high degree of autonomy and enthusiasm of the learner. It has no external forced supervision and guidance. The learner learns through self-management and supervision. Therefore, if the learner's learning attitude is not positive and the learning goal is not clear, then learning When the difficulties encountered in the study will be helpless, it will lead to the lack of systematic knowledge of learning.

(3) Weak ability to acquire and filter fragmented resources

These two abilities affect the fragmented learning effect of college students to varying degrees, and play a crucial role. According to the questionnaire survey, in the process of fragmented learning, only 16.23% of people can use information processing tools (such as mind maps, etc.) to extract information; only 15.71% of people can choose resources according to their needs. It shows that the acquisition and screening ability of college students' resources needs to be improved.

4.2. Objective Question

(1) Information resources are cluttered and it is difficult to obtain effective information

Under the influence of new media, learning resources are updated rapidly. Although resources are becoming more and more abundant, there is a large amount of fragmented information on the Internet. However, the more information resources, the better. It is difficult for learners to find the information they need in the messy and disordered information resources, which is not only wasteful Time and waste of experience.

(2) Knowledge points tend to be scattered, which is not conducive to memory

Fragmented learning is different from systematic learning. Fragmented knowledge does not form a system, and the main feature is knowledge fragmentation. When conducting fragmented learning, the acquired knowledge points are not concentrated enough and tend to be fragmented. It is difficult for learners to form their own knowledge system in a short time. Although it is beneficial to short-term memory, it is difficult to carry out due to lack of systematic learning. long-term memory.

Since the time of fragmented learning is also fragmented, in order to obtain a complete knowledge system, it is necessary to use the fragmented time to gather the scattered knowledge points into a knowledge system, thereby forming one's own knowledge system. In order to obtain a good fragmented learning effect, it is necessary to process the obtained fragmented knowledge and integrate it into a complete knowledge system. Because the fragmented knowledge is relatively scattered, its processing requires a strong systematic theory. Because college students lack the guidance of the systematic theory of the processing of fragmented knowledge, the effect of fragmented learning will be unsatisfactory.

5. Optimization Strategies for Fragmented Learning of College Students

5.1. School Level

5.1.1. Strengthen Network Construction And Improve Fragmented Learning Environment

To improve the efficiency of college students' fragmented learning, it is necessary for schools to build an online learning environment. First of all, schools should strengthen the improvement of hardware facilities, such as adding computers in the library, allowing students to access information online, strengthening the school's network broadband construction, and striving to achieve full coverage of school WIFI, so that students can conduct fragmented learning anytime, anywhere. Secondly, schools should strengthen the construction of soft environment, such as developing and optimizing online courses, micro-videos, etc., establishing online learning platforms, and adding high-quality teaching resources from other universities to integrate excellent teaching resources for college students from school to school. In addition, schools can try Some courses are taught in the form of fragmented learning, so that college students can use mobile devices to learn by themselves and experience the charm of fragmented learning [13].

Schools should use big data, questionnaires and other means to deeply understand the fragmented learning needs and motivations of college students, and improve the efficiency of

their online learning. Continuously improve and optimize the teaching process, integrate online and offline teaching methods, and ultimately improve the quality of higher education [11].

5.1.2. Improve the Efficiency of Resource Use and Improve Fragmented Learning Content

For undergraduates in colleges and universities, fragmented learning has become an inevitable development trend, which is both an opportunity and a challenge. Schools should follow the trend of the times, develop various online courses and teaching resource platforms, and constantly enrich their own teaching and scientific research resources.

Schools should actively cultivate the skills of using scientific research platforms and online courses, and improve students' learning search ability and screening ability; schools should vigorously publicize the use methods and search skills of professional academic resources, conduct lecture training or set up related courses, so that college students can make proper use of digitalization resources, so as to optimize the effect of fragmented learning.

5.2. Teacher Level

5.2.1. Cultivating College Students' Self-Management Ability

Teachers play an important role in promoting the fragmented learning of college students. A large part of the reason for the unsatisfactory effect of fragmented learning of college students is the lack of self-management ability of college students. Having good self-management ability can effectively improve their work efficiency and learning efficiency, and at the same time allow themselves to play in a limited time. maximum efficiency. Self-management skills include learning time management, goal planning management, reflective management, and learning resource management[2]. First, teachers should guide students to formulate fragmented learning plans and teach relevant time management strategies; secondly, teachers should cultivate students' ability to think independently, and be able to think independently and have their own ideas for problems in fragmented learning; finally, teachers should It is necessary to teach the methods and tools of learning resource management, guide students to effectively manage learning resources during fragmented learning, and transform fragmented knowledge into their own systematic knowledge.

5.2.2. Innovate Teaching Methods

Under the new media environment, college students mainly obtain fragmented information and no longer passively accept knowledge. Therefore, corresponding innovations in teaching methods should be carried out to improve students' learning efficiency. For example, teachers can use the school teaching platform to upload course content, or use learning software such as Xuetong and MOOC to facilitate students to preview before class and consolidate after class exercises; through fast and convenient communication tools such as WeChat, QQ, WeChat, etc. Bo and others form a fragmented learning group, which is helpful for teachers to quickly understand the learning status of students in a short period of time.

In addition, teachers can use the form of small groups to let college students work together to complete the group tasks assigned by teachers, promote the cooperative learning ability among college students, answer students' questions in a timely manner, enhance learning exchanges between teachers and students, and improve learner participation. positivity [2].

5.3. Student Level

5.3.1. Improve the Ability of Fragmented Learning

When conducting fragmented learning, self-supervision and restraint are required to improve learning autonomy. Arrange your study time reasonably and make a study plan. Secondly, strengthen mutual supervision and communication between teachers and students by establishing QQ groups and WeChat groups. Finally, make study notes, record the knowledge

content of learning, and do a good job of knowledge framework; combine what you have learned in class to form a complete knowledge system.

(1) Improve the ability to obtain fragmented learning resources.

In the context of new media, network information is ubiquitous, and the benefit of network search is that information resources can be obtained efficiently, quickly and purposefully anytime, anywhere. For college students, the most important and crucial point is to find keywords that can summarize their own needs, and obtain effective learning resources through keyword search; second, choose the appropriate one among various Internet search tools for fragmentation Learning, which requires learners to master the advantages and disadvantages of various search tools, and conduct targeted screening; thirdly, college students should fully understand the resource scope of CNKI, Wanfang, VIP and other network databases, and use the database in fragmented search tools. Time to assist academic research. Finally, learners should be good at identifying various network resources and maintain a rational attitude when acquiring fragmented learning resources.

(2) Improve the ability to select fragmented learning resources.

In the fragmented learning process, if the learner is disturbed by irrelevant information, it will lead to waste of time, reduce the learning efficiency, and cause the learner to have bad emotions, so that they cannot concentrate on in-depth learning. Therefore, in the process of fragmented learning, it is necessary to improve the selection ability of resources and avoid the interference of irrelevant information.

(3) Improve the ability of fragmented knowledge management

After choosing fragmented learning resources, college students should regularly classify and sort out the fragmented knowledge they have learned to form their own knowledge system.

College students should turn these mobile devices into efficient learning tools, and use synchronization devices such as Baidu cloud disk to store fragmented knowledge [18], so that college students can learn and summarize knowledge anytime, anywhere.

(4) Improve the time management ability of fragmented learning

First, college students should have a clear learning purpose; second, college students should formulate expected plans according to the length of the fragmented time, rationally arrange their scattered time periods, and give full play to the role of fragmented time. Finally, after planning fragmented time, college students should strengthen the implementation of fragmented time management, so that time management can play a practical role.

5.3.2. Increase Learning Depth

College students should carry out deeper learning and integration of the knowledge acquired by fragmented learning, form a new whole of knowledge, and continuously improve their learning depth. The reconstructed knowledge system can inherit the original knowledge system, just as the reconstructed knowledge can solve the problems that the original similar knowledge system cannot solve, but it does not mean that the reconstructed knowledge is necessarily better than the previous knowledge [19].

Therefore, it is recommended to sort out the fragmented knowledge that has been learned and summarize it into a complete knowledge system. According to its own learning characteristics, it is recommended to sort out the connection between the knowledge points, and integrate the knowledge points in the form of taking notes.

6. Conclusion

In order to better understand the current situation of college students' fragmented learning under the background of new media, this paper expounds the concepts and characteristics of new media and fragmented learning on the basis of relevant research at home and abroad, and

summarizes the existing problems of college students in the process of fragmented learning. Finally, strategies to improve fragmented learning are proposed from the perspectives of colleges, teachers and college students.

With the rapid development of new media, mobile phones and computers have become the most important devices for obtaining information from the outside world. Fragmented learning has emerged, which has greatly changed the way college students learn. In the context of online learning, the traditional teaching method has been changed, the integration of educational resources has been realized, and the popularization and popularization of education has been promoted. Fragmented learning can innovate the personalized learning system, liberate everyone's personal nature, and make personalized learning possible. Individuals' unique study habits have been internalized to form different knowledge systems. The future era is an era of individual liberation and an era of continuous innovation. Fragmented learning is particularly important. It is necessary to constantly adapt to the changes of the times, and propose reasonable strategies, so that fragmented learning can truly become a new way of autonomous learning, lifelong learning and smart learning.

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