Construction of Dependent Learning Mode for College Students Based on Intelligent Learning Environment

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Abstract. With the guidance of advanced information technology, education in China is constantly evolving, and both the teaching methods of educators and the learning methods of students are constantly being updated and optimized. Constructing a dependent learning mode for college students under the intelligent learning environment not only enhances their dependent learning ability, but also breaks the limitations of time and space in traditional teaching, enabling various educational resources to be fully utilized and shared. This paper elaborates on the concept of intelligent learning environment and the core elements of dependent learning, analyzes the significance of dependent learning for college students, and proposes a strategy for constructing a dependent learning mode for college students based on intelligent learning environment for reference.

1 Introduction

The progress and development of society have led to the emergence of more intelligent technologies, which have given more possibilities for the construction of intelligent learning environments in various fields. Under the intelligent learning environment, progress has been made in education at all stages in China. Many college teachers have combined the construction of intelligent learning environments with students' dependent learning, hoping to enhance their awareness and ability of dependent learning. However, the effectiveness of college students' dependent learning is currently not high, as evidenced by many aspects such as the failure to meet students' personalized learning needs.

2 Intelligent Learning Environment

With the continuous development of information and scientific technology, education is constantly integrating with various technologies, giving rise to the emergence of intelligent environments. China's definition of intelligent learning environment can be traced back to 2006, and it differs greatly from ordinary learning environments in terms of its sophistication. An intelligent learning environment can be a learning place or a learning activity space. The provision of intelligent learning resources is influenced by learners, teachers, and the intelligent environment (see Figure 1). In addition, an intelligent learning environment can record learners' learning processes and outcomes, which helps to provide better feedback to learners and improve their learning effectiveness [1]. Under the intelligent learning environment, college students can have a sense of learning atmosphere and comfort, further stimulating their learning initiative. Therefore, the most direct way for college students is to construct a dependent learning mode based on the intelligent learning environment.

Fig. 1. Factors influencing the design of intelligent learning resources

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3 Core Elements of Dependent Learning

3.1 Learning Objectives
The process of dependent learning is the interaction and mutual influence between learners and the learning environment. In this process, learners need to have self-learning awareness and behavior and can set corresponding learning objectives to supervise and regulate their learning behavior [2]. Learning objectives have the function of supervising, regulating, and controlling learners' learning behavior, so they can help learners generate the motivation for dependent learning. Reasonable learning objectives can stimulate learners' interest in learning and have a positive effect on their learning outcomes.

3.2 Learning Resources
Dependent learning requires learners to have certain autonomy and the ability to learn and master the necessary knowledge and skills through their own abilities [3]. In the process of dependent learning, learners need to be provided with certain learning resources. Learning resources include learning tools and content, such as learners completing dependent learning through some courseware or micro-videos provided by teachers. Therefore, learning resources have a guiding function for learners, and the quality of learning resources is a direct factor that can affect learners' learning outcomes.

3.3 Cooperative Learning
Due to the limited learning ability of learners, they may encounter various difficulties in the process of dependent learning and need to seek help. Therefore, dependent learning is not independent learning without teachers and peers, but independent learning under the guidance of teachers and with the help of peers. Therefore, learners need to have a certain sense of cooperation. Cooperative learning can not only stimulate learners' learning motivation but also enhance their learning efficiency under the supervision of teachers and peers.

3.4 Learning Evaluation and Reflection
In the process of dependent learning, learners need to reflect and summarize their learning outcomes in a timely manner, which helps them adjust their learning strategies based on their shortcomings and problems [4]. At the same time, learning evaluation and reflection can also promote learners' growth and development, enabling them to obtain correct goals and development directions through self-diagnosis and self-regulation.

4 Significance of Dependent Learning for College Students
With the continuous updating and optimization of educational concepts, the concept of building a learning society has appeared in the public eye. How to cultivate college students' ability for dependent learning has become an important research topic in the field of education. "Core competencies for Chinese students' development" also mentions the element of "learning to learn," requiring students to find learning methods that meet their own learning needs and personal development based on an understanding of the importance of learning, and to continuously form a lifelong learning concept through dependent learning.

College students' ability for dependent learning is a requirement for the development of modern society [5]. Through dependent learning, students can not only quickly adapt to the learning environment but also be responsible for their own personal development by setting learning goals. On the one hand, after entering college, students have more freedom and spare time. Many times, college students may have a mentality and behavior of neglecting learning, losing the sense of urgency for learning, which is not conducive to their growth and development. On the other hand, dependent learning is beneficial for meeting students' individualized learning needs. Students can choose learning content and directions based on their in-

Fig. 2. Cooperative learning
interests, which not only strengthens their learning awareness but also stimulates their learning initiative, encouraging them to collect relevant employment information in their field and align with the requirements of social enterprises. This is helpful in enhancing their understanding of learning and career planning, making them able to seize development opportunities firmly after graduation and take responsibility for themselves.

5 Strategies for Constructing the Dependent Learning Mode of College Students Dependent Learning

5.1 Cultivating the Ability for Dependent Learning

Kapoor proposed the Dual Processing Adaptation Model for Dependent Learning, as shown in Figure 3, which indicates that dependent learning involves two aspects: whether the learner wants to learn and whether the learner has the ability to learn. That is to say, learners need to have a certain learning motivation and metacognitive ability. Therefore, in constructing the dependent learning mode of college students based on intelligent learning environment, it is necessary to further stimulate students’ learning motivation and enhance their ability for dependent learning.

On the one hand, teachers can guide students to conduct purposeful dependent learning by using problem-oriented approaches. The process of students exploring problems proposed by teachers is the process of dependent learning. Students can search for information related to the problem, communicate with teachers or other students, and carry out practical activities. No matter which approach they choose to obtain the answer to the problem, they can cultivate their ability for dependent learning. On the other hand, helping students establish self-thinking awareness is also important. Dependent learning requires students to have self-learning awareness and thinking, which can guide and urge students’ dependent learning behavior. For example, schools can organize academic lectures and alumni sharing activities, providing students with more planning and choice in learning, meeting their various learning needs and helping them have healthy learning intentions and motivations.

5.2 Selecting Dependent Learning Tools

College students can choose the following four learning methods based on their needs for dependent learning:

Firstly, the need for course learning. As the study tasks of college students become heavier, they can use network learning resources for efficient dependent learning in order to better complete relevant professional learning tasks and meet the requirements of teachers. For example, when learning English courses, college students can use some network platforms to strengthen their English skills such as listening and vocabulary. They can use apps like Bai-cizhan and Youdao as shown in Figure 4.

Secondly, the need to strengthen professional proficiency. In addition to completing certain course tasks, some students may have the need to strengthen their professional proficiency, such as students who want to take postgraduate entrance examinations or study abroad. Thirdly, the need for expansion. Therefore, students can...
use MOOCs (Massive Open Online Courses), Netease Open Course, and other platforms to expand their knowledge in areas of interest. Dependent learning cannot be separated from the development of dependent learning plans, which is also the way for students to achieve personalized learning. After having specific learning goals, in the intelligent learning environment, students can choose suitable learning tools and methods to promote their learning progress[6].

6 Constructing the Dependent Learning Mode of College Students Based on Intelligent Learning Environment

As there are no rewards or punishments in the process of dependent learning, college students may easily lose their confidence in learning and affect their learning efficiency due to fatigue or difficulties encountered during the process. Therefore, students need to adjust their goals and learning methods in real-time during learning to give themselves a sense of urgency. Additionally, students also need to evaluate and reflect on their learning effectiveness continuously, obtain growth and learning directions, and gain a sense of achievement from their development, thus enhancing their learning enthusiasm. Teachers need to play a guiding role in the process of dependent learning, cultivate students’ self-learning awareness, and help them develop good learning habits. Teachers can communicate and interact regularly with students through intelligent teaching platforms to help students who encounter learning difficulties and supervise other students. Schools can select appropriate network platforms for students based on their dependent learning situations, screen out complex and chaotic network resources, and assist students in dependent learning[7].

7 Conclusion

College teachers can fully utilize the products of education under information technology to construct dependent learning modes for students. Building a dependent learning mode in an intelligent environment can not only meet the personalized learning needs of college students but also improve their learning efficiency, which has an undeniable role in their future development. Additionally, the intelligent learning environment has brought rich dependent learning platforms and tools, which can help students develop their dependent learning abilities in such an environment and adapt to the development requirements of modern society.

References