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A Research on Academic Guidance Strategies for College Students from the Perspective of Metacognition Theory

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Abstract: The concept of metacognition was proposed by American psychologist Flavell in 1976, emphasizing the individual's cognitive and regulatory abilities in cognitive processes. In higher education, academic guidance plays a crucial role in the academic development of students. There are many shortcomings in current academic guidance mode, and it cannot fully meet the personalized needs of students. This article analyzes the basic content of metacognition theory and its application in academic guidance, and proposes some specific guidance strategies for reference, hoping to help students improve learning efficiency and lay solid foundation for their future development.

Keywords: metacognition theory, college students, academic guidance, strategies research

Introduction

With the improvement of education level, the issue of academic guidance for college students is receiving more and more attention. It is not only an important means to help students complete their studies successfully, but also an important way to cultivate their self-learning ability and comprehensive quality. Its effectiveness is directly related to the future development of students. The metacognition theory emphasizes the individual's ability to monitor and regulate their own cognitive processes. Domestic and foreign researchers are gradually applying metacognition theory to the field of education. Currently, most research is focused on language learning, and there is relatively little systematic research on academic guidance for college students. The author's school has implemented a full academic mentor system since the undergraduate students been admitted in 2021. However, there are many problems in practical operation, such as a single guidance mode and insufficient personalized requirements, which should be urgently solved through scientific theoretical methods.

1. Overview of metacognition theory

The metacognition theory was first proposed by American psychologist John H. Flavell in 1976, which suggests that metacognition refers to an individual's knowledge of cognitive processes, outcomes, and related activities, including their ability to monitor, regulate, and evaluate these processes. Since Flavell proposed the metacognition theory, domestic scholars have also begun to pay attention to research in the metacognition field. Metacognition theory mainly includes metacognitive knowledge and metacognition regulation. Metacognition knowledge refers to an individual's understanding of the cognitive process and its influencing factors, and metacognition regulation involves an individual's planning, monitoring, and evaluation in cognitive activities.

Flavell divides metacognition knowledge into three categories: personal knowledge, task knowledge, and strategic

knowledge. The first is knowledge about the cognitive processes of individuals themselves and others, the second is knowledge about specific tasks and their requirements, and the third is knowledge about methods and strategies for completing cognitive tasks. Metacognition regulation includes planning, monitoring, and evaluation. Planning refers to the planning and preparation work carried out before the start of cognitive activities, monitoring refers to real-time monitoring of cognitive processes during the process of cognitive activities, and evaluation refers to the evaluation of cognitive processes and outcomes after the end of cognitive activities.

Metacognition knowledge and metacognition regulation complement each other. The former provides the foundation for the latter, and the latter further enriches and improves the former. Through continuous metacognition activities, individuals can better understand and regulate their cognitive processes, improve learning efficiency.[1]

2. Current situation of academic guidance for college students

In recent years, many universities have begun to implement academic mentor systems, aiming to provide students with more comprehensive and personalized academic guidance, help them successfully complete their studies, and enhance their academic abilities and professional qualities. The author's university has implemented a full staff academic mentor system since the undergraduate level enrolled in 2021, providing students with full online and offline academic guidance during their study period. The main responsibilities of academic mentors include helping students establish correct values, guiding academic planning, providing professional guidance, assisting in the learning process, providing academic assistance, and guiding scientific research.

The current academic guidance model has achieved certain results, but there are still some shortcomings in practical operation. The current academic guidance is mostly conducted in the form of lectures, tutoring classes, etc. The guidance model lacks flexibility and is difficult to meet the personalized needs of different students. The interaction between academic mentors and students is limited, and students often encounter problems in their studies without timely feedback, making it difficult to provide sufficient guidance for each student.

3. The application strategies of metacognition theory in academic guidance

3.1 Value guidance

Value guidance is a crucial aspect of academic guidance, the General Secretary Xi. pointed out the younger generation has ideals and responsibilities, only then can the country have a future and the nation have hope. Teachers are expected to motivate students to set lofty ideals and clarify learning goals, and help students constantly reflect and adjust through metacognition theory. Xi. also emphasized that a country is not prosperous without morality, and a person is not upright without morality. Teachers need to pay attention to students' morality education, cultivate their good morality and quality, and consciously regulate their behavior. Teachers are supposed to guide students to establish correct values, help them recognize the importance of learning, establish correct learning concepts, and through the teaching of metacognition knowledge, students can better understand the meaning of learning. Students can be encouraged to set personal learning goals, regularly adjust their learning plans, and engage in more targeted learning activities to achieve better learning outcomes.

3.2 Academic planning guidance

Teachers can help students develop personalized academic plans based on their own situations, enabling them to better leverage their strengths and improve academic performance. When guiding students in formulating academic plans, teachers need to encourage them to fully consider their metacognition abilities, identify problems in academic planning and make corresponding adjustments to ensure the effectiveness of their own plans.

3.3 Professional guidance education

When teaching professional knowledge, teachers can introduce metacognition theory to improve students' self-regulation ability, enable them to better understand professional knowledge and improve students' learning efficiency.

Based on the dynamic changes in professional development, teachers can guide students to adjust their learning strategies to enhance their professional abilities, adapt to new knowledge requirements, and better respond to the challenges in professional learning.

3.4 Learning process guidance

Teachers are able to help students monitor their learning progress by utilizing metacognition regulation strategies in real time, and based on feedback, students need to adjust their learning methods, and promote self-monitoring of their learning process. Students can make full use of learning tools to record and reflect on their learning process, and promptly identify and solve learning problems. Teachers are expected to teach students scientific learning methods, enabling them to learn time management, effective note taking, and correct review techniques, making students better manage their learning activities and improve their learning efficiency in all aspects.

3.5 Academic assistance

Teachers should provide necessary support for students with learning difficulties, and can provide personalized academic assistance measures based on their specific situations to help them overcome learning obstacles. Especially for students with learning difficulties, teachers can conduct in-depth analysis of individuals and develop improvement plans that are suitable for them. They also need to provide continuous support, so that students can receive more attention in their studies and synchronously pay attention to their psychological state, helping them maintain a positive learning attitude.

3.6 Research guidance

Teachers should actively guide students in conducting scientific research activities, cultivate their metacognition abilities in many aspects such as literature search, data retrieval, and research design, helping students master scientific research methods and improving their scientific research abilities and academic literacy. Students should be appropriately encouraged to participate in various academic competitions and practical activities, thus enhancing their comprehensive abilities such as scientific research and innovation ability and knowledge application ability.

4. The practical path of metacognition guidance strategies

4.1 Combination of online and offline model

The combination of online and offline academic guidance mode can fully utilize the advantages of modern technology, provide flexible and diverse guidance methods, and improve the coverage of academic guidance. Online platforms can provide students with anytime and anywhere academic guidance. Teachers can record course videos, and students can watch and learn at any time. Teachers can engage in face-to-face communication with students through offline classroom teaching, one-on-one tutoring, and group discussions to address personalized issues and provide targeted advice. Online and offline academic guidance can complement and collaborate with each other. Tasks assigned in online courses can be discussed in offline tutoring, achieving an effective combination of online and offline. Teachers can also further explain the content that students do not understand in online courses through offline discussions, enhancing learning effectiveness.[2]

4.2 Implementation of personalized guidance strategies

The personalized guidance strategy aims to provide tailored academic guidance and psychological assistance based on the personalized needs of students, ensuring the targeted and effective guidance. Teachers should fully understand the learning background, interests, and career goals of students, design improvement plans for students with poor academic performance, and provide career planning suggestions for students with clear career goals. During the implementation process, teachers need to adjust and optimize in a timely manner based on student feedback to ensure the effectiveness of guidance. Personalized guidance should also pay attention to the psychological health of students, provide psychological support through psychological counseling and health education lectures, establish a trusting teacher-student relationship and a safe environment, thus improving the level of psychological health of students.

4.3 Application of metacognition theory in teaching

4.3.1 Teaching objective design

The application of metacognition theory in teaching is reflected in setting clear, phased, and personalized learning goals, and dynamically adjusting them through regular evaluation and feedback. Teachers set specific learning goals for each class and break them down into different stages by considering individual differences among students and ensuring that the goals are actionable. They should regularly monitor student progress and adjust goals in a timely manner, guiding students to self monitor and reflect, and improving learning efficiency.

4.3.2 Teaching content design

Firstly, the teacher assigns short-term and long-term learning tasks, for example: Listing at least 8 required and professional extracurricular books for each academic year based on student consent, and students need to write reading experience and discuss it at the end of the semester. Secondly, teachers can structure teaching content to help students better understand knowledge. Through charts and mind maps, complex knowledge can be structured and divided into several modules for explanation and learning. They can also provide students with rich learning resources, allowing them to independently choose learning resources according to their learning needs and engage in in-depth learning.

4.3.3 Teaching method design

Teachers can use multiple interactive teaching methods, such as group discussions, case studies, and role-playing, to encourage students to share their learning experiences and insights, inspire and learn from each other, and enhance their interest in learning. Through problem-oriented learning, teachers can design a series of tasks related to course content, requiring students to solve these problems through self-directed learning, thereby improving their problem-solving abilities. Teachers should appropriately encourage students to reflect and summarize during the learning process, record their own learning process, and propose improvement measures to help students better understand themselves learning situation.[3]

4.3.4 Teaching environment design

Teachers can adopt a combination of online and offline teaching modes, fully utilizing multimedia resources and digital tools to enhance interactivity. Online platforms provide abundant learning resources and recorded lectures, while offline face-to-face guidance helps to deepen understanding of problems. Students can also be encouraged to participate in professional lectures and graduate thesis defense, thereby expanding their horizons and thinking, and improving their metacognition reflection ability.

4.3.5 Monitoring and testing of teaching effectiveness

The monitoring and testing of teaching effectiveness should not only focus on students' knowledge mastery, but also pay attention to the cultivation of their self reflection ability. Students can conduct self-examination by setting learning goals, documenting the learning process, and reflecting on learning methods. Teachers should adopt diverse assessment methods to help students identify learning problems and provide guidance. Utilizing learning analysis tools to monitor student learning data can make teachers understand student learning progress, and adjust teaching strategies in time.

5. Conclusion

Metacognition theory can significantly enhance the effectiveness of academic guidance. Teachers should set clear goals, select appropriate strategies and self monitor to assist in improving students' learning abilities. In the future, it's supposed to continue to enhance the metacognitive guidance ability of teachers, strengthen personalized academic guidance, promote a combination of online and offline academic guidance models, establish a scientific academic guidance and evaluation mechanism, and strengthen psychological support and academic assistance. Academic guidance tools can be developed and optimized, and diverse academic guidance models can also be explored to provide more comprehensive academic support.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

References

[1] Bi Xinsheng, Xue Linyue, Zhang Jincheng, et al. Cultivation of Employment Ability of Xinjiang Engineering College Students from the Perspective of Metacognitive Theory [J]. Education and Teaching Forum. 2013; (48): 212-213.

[2] Ma Xiaolin, He Jixiang. Introducing Metacognitive Theory to Improve the Effectiveness of Innovation and Entrepreneurship Teaching [J]. Bohai Rim Economic Outlook. 2017; (11): 143-144.

[3] Lin Jingjun. The Value, Dilemma, and Strategy of Academic Guidance for College Students from the Perspective of Counselors: Taking the Work of Foreign Language Majors in Vocational Colleges as an Example [J]. Journal of Guangdong Jiaotong Vocational and Technical College. 2022; 21 (02): 118-122.