# THE INTERVENTION EFFECT OF INNOVATIVE EDUCATION OF FINANCIAL ACCOUNTING IN COLLEGES AND UNIVERSITIES ON STUDENTS WITH COGNITIVE IMPAIRMENT

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**Background:** In the teaching process of financial accounting in colleges and universities, the cognitive impairment of middle school students is mainly divided into three types: speech information impairment, intellectual skill impairment and cognitive strategy impairment. Among them, the speech information barrier refers to the language information transmitted by teachers to students in the process of teaching. Students cannot understand and acquire normally, or there are major deviations contrary to common habits in the process of understanding and acquisition. This cognitive barrier is not only reflected in the process of language transmission, but also in all the process of information transmission. Sometimes students' essential metacognitive barrier will affect students' understanding of problem representation, resulting in information omission, information misunderstanding, metaphor interference and so on. Intellectual skill barrier refers to students' inability to acquire intellectual skills normally due to bad thinking set, common sense contrary to common sense, wrong way of thinking and other problems. The cause of this type of obstacle is often difficult to judge, because human beings need to go through a long cognitive stage to learn an intelligent skill. In this process, the cognitive problems of any factor may lead to the final difficulty for students to acquire intelligent skills. Cognitive strategy disorder refers to students' weak ability to grasp and dominate their psychological state and thinking state in life and learning, resulting in deviation in the cognitive process. Cognitive strategy disorder can be simply divided into two types: weak metacognitive ability and weak cognitive transferability. Weak metacognitive ability refers to the lack of basic cognition of the outside world. These basic cognitions include self-cognition, emotional experience cognition, self-state cognition in action and so on. The weak ability of cognitive transfer refers to the lack of ability to apply the existing cognitive experience to new things. The above cognitive barriers may lead to the phenomenon of teaching failure in the process of financial accounting education in colleges and universities. In the process of innovative teaching reform of financial accounting education in colleges and universities, we should actively consider the learning status of students with cognitive impairment, formulate methods more suitable for students with cognitive impairment in teaching systems and methods, and help them reduce the nonprofessional difficulties encountered in the learning process, so as to make students with cognitive impairment pay more attention to their professional fields. Through the analysis of students' cognitive impairment, we can provide a new and effective way for the reform of financial accounting education in colleges and universities.

**Objective:** This study classifies the cognitive impairment of college students majoring in financial accounting, so as to provide an entry point for the teaching reform of students' cognitive impairment.

**Subjects and methods:** This study combines single factor analysis with serial substitution method to analyze the relationship between teaching methods and students' cognitive impairment by measuring the relationship between factors.

**Study design:** In this study, the indicators are divided into measurable factors. Firstly, the single factor analysis method is used to analyze the relationship between factors, and then the serial substitution method is used to replace variables to measure the impact of changes in teaching factors on students' cognitive impairment.

**Methods:** The data of this study are sorted and provided by the majors of economic management in colleges and universities, and some data are drawn from the school background system.

**Results:** The influence of students' cognitive impairment on different teaching factors is shown in Figure 1.

Figure 1 shows that the cognitive impairment of middle school students has a great impact on the operation rules and concept understanding of financial teaching in colleges and universities, while it has a relatively small impact on the original voucher and practical operation cognition. This is because some knowledge in the original voucher and practical operation cognition can be assisted by memory without in-depth understanding.

**Conclusions:** The education of financial accounting in colleges and universities is still lacked of targeted measures for students with cognitive impairment. The three main cognitive impairment types of speech information impairment, intellectual skill impairment and cognitive strategy impairment will have a great impact on the professional education of financial accounting in colleges and universities. Therefore, this study starts with these three cognitive impairment types, disassembles the different modules of professional education of financial accounting in colleges and universities, and associates them with

cognitive impairment factors for impact analysis. Through the targeted education reform, we can find the difficulties of students with cognitive impairment in the learning process from the perspective of practical coping strategies, and solve them in a systematic way. This reform can help teachers understand the actual situation of students with cognitive impairment in the learning process, and provide a way to solve practical problems.



Figure 1. Analysis of teaching elements

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# OPTIMIZATION OF MULTI-ROBOT DYNAMIC COLLISION INTELLIGENT DETECTION SYSTEM OF COGNITIVE IMPROVEMENT MECHANISM

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**Background:** Cognitive impairment refers to the reduction or impairment of brain function in memory, calculation, orientation, structural ability, executive ability, language understanding, expression and application process efficiency due to the influence of internal and external environmental conditions when people recognize the information. Different degrees of cognitive impairment will have different effects on people's overall function and survival function, making the brain advanced intelligent processing process related to learning, memory and thinking judgment abnormal, resulting in learning, memory impairment, visuospatial impairment and executive dysfunction. When patients with cognitive impairment perceive information, they have a deviation in understanding and perception of the form and content of information, which leads to the functional imbalance of neural information in the process of activity, resulting in the conflict between the information sense obtained by the information person and the original cognition, making judgments and behaviors inconsistent with the reality, which increases the difficulty of information extraction. Mild cognitive impairment mainly refers to mild memory or other cognitive impairment beyond the allowable range of their age, with the normal ability of daily living. However, in the field of epidemiological research, scholars have found that the proportion of mild cognitive impairment has increased year by year. Effective early intervention for cognitive impairment can effectively improve the cognitive level of patients, improve their attention and understanding, and help them make better cognitive judgment and decision-making. When people with cognitive impairment background carry out system detection and method design, they often consider the problems and needs of patients with cognitive impairment in information cognition and decision-making judgment, to promote the optimization and improvement of the intelligent detection system.

With the continuous progress of science and technology and the vigorous development of the digital economy, the application scope of 3D vision technology has been gradually expanded, which makes 3D vision technology play an important role in the terminal recognition, induction and transmission of information of artificial intelligence devices, and the related vision technology products have also greatly improved people's quality of life and level. Collision detection technology refers to intervening before or during the