

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.

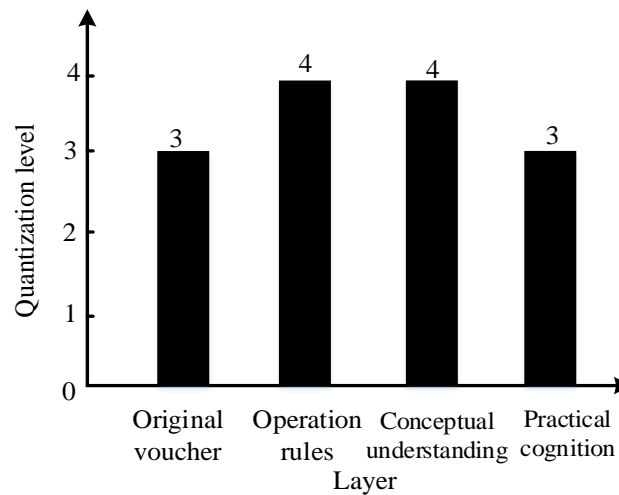


Figure 1. Analysis of teaching elements

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

Yang Zhang

*School of Artificial Intelligence Application, Shanghai Urban Construction Vocational College, Shanghai 201415, China*

**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

collision of geometry, and issuing instructions, to reduce a lot of time consumed in detection. The intelligent detection system of dynamic collision between multi robots under 3D vision technology is to collect the three-dimensional coordinate information of spatial points in the field of view with the help of a 3D camera head, and obtain the three-dimensional imaging of the information with the help of an algorithm intelligence, to enable multi robots to carry out collision detection with a certain relationship distribution and movement in a specific range. Then improve the accuracy of intelligent system detection and the application efficiency of related products. The design of a multi-robot dynamic collision intelligent detection system will affect the performance and demand satisfaction of consumers.

**Objective:** In order to meet the cognitive needs of patients with cognitive impairment and improve their cognitive level and ability, the intelligent detection system for dynamic collision between multiple robots is optimized and improved, such as information extraction, technical function satisfaction and so on. The improved system model is used to test its impact on patients with cognitive impairment and product use.

**Research objects and methods:** Some patients with cognitive impairment were selected as the research object. At the same time, the design of the detection system was optimized when the multi-robot dynamic collision intelligent detection designer understood the psychological demands and cognitive degree of patients with cognitive impairment, such as information extraction, instruction discrimination, etc. The optimized model was applied to patients with cognitive impairment to test the application effect of the model and the cognitive improvement mechanism of patients.

**Method design:** Learning the background knowledge of cognitive impairment for intelligent detection designers, making them optimize and improve the detection system model on the basis of understanding the cognitive situation of patients with cognitive impairment, and applying the improved system model to patients with cognitive impairment, collecting the remission of cognitive impairment of the subjects before and after the experiment, and obtaining the experimental results.

**Methods:** The association rule algorithm was used to explore the relationship between the background of cognitive impairment and system optimization, and the data before and after the experiment were sorted and analyzed with statistical analysis tools.

**Results:** The application of computer systems and the development of data technology can effectively improve the cognitive level of patients with cognitive impairment. The design optimization and improvement of 3D vision multi-robot dynamic collision intelligent detection system from the perspective of cognitive impairment are studied. The results show that the improved system model can reduce the error of information extraction of patients with cognitive impairment. Improve their cognitive level and mental health. Table 1 shows the satisfaction scores of people with cognitive impairment on the intelligent detection system for dynamic collision between multiple robots before and after the experiment.

**Table 1.** Before and after the experiment, the satisfaction scores of people with cognitive impairment on the intelligent detection system of the multi-robot dynamic collision were statistically analyzed

Index	Product satisfaction	Convenience of information extraction	Language comprehension
Before the experiment	9.25±2.17	7.25±2.13	11.35±1.67
After the experiment	15.23±2.05	19.23±1.43	15.24±1.12

**Conclusions:** Reducing the area requiring dynamic collision detection between multiple robots can effectively realize the accuracy and efficiency of dynamic collision detection between multiple robots. At the same time, the introduction of cognitive impairment learning background to designers deepens the grasp of the depth of people's needs, realizes the optimization and improvement of the detection system model, and effectively improves the cognitive level and product satisfaction of patients with cognitive impairment.

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## THE RELATIONSHIP BETWEEN TECHNOLOGICAL INNOVATION AND INDUSTRIAL ECONOMIC DEVELOPMENT BASED ON SOCIAL PSYCHOLOGY

Lili Guan

*School of Economics and Management, Zhengzhou Normal University, Zhengzhou 450044, China*

**Background:** Social psychology is a science that studies people's social behavior and psychological basis in social communication. Different individuals and groups usually show different psychological and