create a good teaching situation and improve the timeliness of teaching. Image teaching shows the forms and social development hotspots at home and abroad to students through image materials and audio-visual, which will put students in a specific situation and improve the persuasion and appeal of teaching. Third, expand teaching time and space and improve students' exploration and creativity. Film and television works can reflect the outlook on life and values, which will enable students to improve their thinking ability and life consciousness in debate and discussion. At present, the problems of the application of film and television teaching method in Marxist teaching are mainly reflected in the following points. First, carefully select rich film and television teaching materials. In the process of selecting teaching materials, we should consider the fit with the purpose of theoretical teaching; The regularity of students' physical and mental growth; Knowledge and ideology of image materials; Pay attention to the timeliness and information of image data. Second, the correct application of image data. The content of image materials needs to be highly consistent with the teaching content. Students should change from passive acceptance of knowledge to active acquisition of knowledge. The teaching process needs to focus on theoretical teaching and supplemented by image teaching. Generally, the teaching time of film and television is 1/3 of the overall class hour. Film and television teaching courses need to be arranged in advance before the beginning, and students need to be driven to discuss together during the classroom. Third, correctly deal with the differences between image teaching methods and other teaching methods. In the case of developing image teaching methods, we should pay attention to its integration with traditional teaching methods, and pay attention to the joint application of interactive teaching, problem teaching, case teaching and other teaching methods.

Objective: This paper analyzes the application effect of film and television teaching in Marxism teaching under the background of cognitive psychology, in order to improve the quality of Marxism teaching in colleges and universities and help students accept professional knowledge in a more relaxed and pleasant situation.

Research objects and methods: 100 college students were selected to carry out the cluster analysis results of film and television teaching in Marx's teaching under the background of cognitive psychology. The evaluation contents include attention, thinking ability, memory function and speech expression ability. The analysis results used the accuracy and recall rate of cognitive process improvement, and the experimental period was 6 months.

Methods: Through the latest version of minitab20 data statistics software, this paper analyzes the application effect of film and television teaching in Marxism teaching under the background of cognitive psychology.

Results: Table 1 refers to the accuracy of Marxist teaching reform before and after the citation of cognitive psychology. On the whole, after applying the reformed Marxism teaching in colleges and universities, students show obvious improvement effects in four cognitive abilities: attention, thinking ability, memory function and speech expression ability.

Table 1. The accuracy of Marxist teaching reform before and after the citation of cognitive psychology

Category	Before	After 1 month	After 3 months	After 6 months
Attention	85.36	86.36	89.35	91.23
Thinking ability	87.56	89.36	91.25	93.28
Memory function	89.36	92.34	93.25	94.26
Speech expression ability	88.36	89.36	91.26	93.24

Conclusions: The effect of the Marxist teaching scheme proposed by the research institute shows that after the application of film and television teaching in Marxist teaching, students' cognitive ability has been generally improved. In the follow-up, this scheme can be applied to Marxist teaching in order to improve the teaching effect of Marxism.

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DIVERSIFICATION OF HIGHER NATIONAL VOCAL MUSIC EDUCATION AND TEACHING UNDER THE OBSTACLE OF THINKING LOGIC

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Background: Thinking obstacle refers to the process that objective things act on the human brain. Due

to the confusion of the starting point of thinking, the fuzziness of thinking image, the deviation of thinking direction, the confusion of thinking logic and the interference of thinking, it is difficult for the human brain to show the normal thinking results of objective things. It can be divided into the abnormal thinking process and abnormal thinking content. The logical barrier of thinking is often manifested in the lack of proper logic in the connection of semantics, that is, when combing the language information organization, the thinking process is limited by relevant conditions or there are conflicts and differences with the original knowledge and ideas, which leads to symbolic thinking, new words, logical fallacious thinking and sophistication thinking. Thinking logic disorder will not only affect people's thinking ability and cognitive ability, lead to their easy to fall into the inherent thinking set, and then lack comprehensiveness and objectivity in the analysis and treatment of problems, but also affect the depth and breadth of people's views on things, resulting in certain physical and mental damage. Thinking logic barriers will limit people's artistic development and the formation of open thinking, reduce people's sensitivity to things and reduce their aesthetic ability. The value of vocal music courses, especially in many colleges and universities, is paid more attention to. However, vocal music teaching is a part of music education and has strong regularity. It needs a lot of practice under the guidance of teachers to strengthen students' music aesthetic experience in training. Due to the differences in individual personality, past learning background and their own endowment resources, vocal music majors show different learning abilities, learning initiative and learning effects. However, the current simplification and "model mechanization" of vocal music education make vocal music education a "tool of education". Learning in a unified model, ignoring the grasp of students' individuality and diversity, ignoring the differences of students' psychological quality and learning psychological problems, will make some students ashamed to show and express themselves. And it will produce self-doubt and negation due to the one-sided evaluation of the outside world, fall into thinking errors and emotional obstacles, produce thinking logic obstacles, and then affect its learning effect. From the perspective of thinking logic obstacles, promoting the diversified development of higher national vocal music education can effectively improve students' perception ability with the help of music carrier, improve the degree of thinking logic obstacles and improve their mental health level.

Objective: In order to improve the mental health level of students with thinking logic disorder, alleviate their symptoms, improve the teaching quality on the premise of meeting the needs of students, and promote the diversified development of vocal music education and teaching.

Research objects and methods: Firstly, the study screened the mental health of students majoring in national vocal music in a university, and took the students with thinking logic obstacles as the research object. Then, with the help of the analytic hierarchy process, it constructed the index level and target level to innovate the current vocal music teaching mode. The diversified teaching model is applied to the research object. The experimental time is four weeks to explore the diversified research and application effect of higher national vocal music education and teaching under the obstacle of thinking logic.

Method design: Bring the learning status and problems of students with thinking logic disorder into the teaching design process, optimize and improve the teaching means and teaching scheme, in order to design a diversified vocal music teaching mode, and collect and analyze the data of the thinking status and learning effect of the research object before and after the experiment, so as to draw the experimental conclusion.

Methods: The exploration of diversified vocal music teaching mode was realized by analytic hierarchy process, and SPSS21.0 statistical Fenix tool to process and analyze data.

Table1. The classroom behavior and cognition of students with thinking logic disorder

Dimension	Mean	*SD*
Self-cognitive value	2.314	0.640
Learning enthusiasm	2.759	0.832
Memory impairment	4.287	0.549
Difficulty in understanding vocal music theory	4.251	0.658
Self-efficacy	2.322	0.613
Evaluation objectivity	2.958	0.521

Results: Vocal music teaching is a course aimed at cultivating and training students to master singing skills and skills, cultivating students' feeling, expression and creative ability of music art, constantly innovating classroom teaching methods and promoting the diversification of national vocal music teaching, which can help to meet the needs of students with ideological and logical obstacles, improve their obstacle symptoms and improve their learning quality. The results show that the innovation of vocal music teaching means and the diversity of programs greatly provide students with cognitive impairment with good learning

effect and enthusiasm, and improve the level of mental health. Table 1 shows the general situation of classroom behavior and cognition of students with thinking logic disorders.

Conclusions: Higher national vocal music education can improve students' understanding and creativity of art through the study of basic theoretical knowledge and the appreciation and practice of artistic ability. At the same time, it can meet the psychological needs of students with thinking logic disorder, promote the diversified development of education and teaching, effectively improve their mental health level, help students improve their professional quality and ability, and accelerate the development and progress of vocal music education.

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MULTIMODAL LEARNING ANALYSIS OF THE APPLICATION OF DATA SCIENCE IN THE RESEARCH OF INVESTMENT PSYCHOLOGY AND BEHAVIOR UNDER COGNITIVE IMPAIRMENT

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Background: Cognitive impairment is a state between normal aging and dementia. It is mainly characterized by mild memory and intellectual impairment, but it remains intact in life ability and cognitive function, which can be manifested in functional impairment such as understanding, judgment, calculation, execution, visual space, language and memory. Cognitive impairment can be divided into three types: perception impairment, memory impairment and thinking impairment. Perceptual disorders include perceptual synthesis disorder, hallucination and so on. Memory impairment includes memory error, memory defect and strong memory. Thinking obstacles include delusion, thinking logic obstacle, association process obstacle and abstract generalization process obstacle. The manifestations of cognitive impairment are emotion, spirit, creation, thinking, movement, language, memory, learning and so on. Mild cognitive impairment is characterized by wandering, anxiety, depression, forgetfulness, memory and attention loss. Moderate cognitive impairment is characterized by further aggravation of cognitive ability. Patients can be characterized by large emotional fluctuation, paranoia, anxiety, reduced understanding and language expression ability, and reduced resolution of objective things such as time. Severe cognitive impairment develops further from moderate cognition. Patients show decreased overall function and develop to dementia, which will lead to delusion, indifference, lack of self-care ability and so on. In the context of cognitive impairment, multimodal learning combined with data science investment psychology and behavior is facing great challenges.

Data science realizes big data investment data analysis by combining professional knowledge, computer and mathematical statistics. The licensing process of data science is to collect, clean, convert and operate data. Data modeling is realized through machine learning and exploratory analysis methods, and finally data visualization is realized. In the context of improving cognitive impairment, multimodal learning combined with investment psychology and behavior of data science needs to do the following. First, realize the integration of investment behavior and psychological business, programming and model in a real sense. Although modern quantitative technology can help investors analyze data to a certain extent, it is difficult for investors to realize real integration due to lack of understanding of data and lack of their own experience. Data science attaches importance to the role of professional knowledge, algorithms and data, which can be integrated with specific industry businesses through programming and models. Second, fully understand the potential value behind the data. Data science is data oriented and takes data as the basis of the whole process. For investors in the field of financial investment, the important basis of decision-making is news media, advertising, transaction data and financial data. The basis for judging whether the data understanding is comprehensive is the scale of the data, the business background of the data, and understanding the data through graphics. In addition, you need to pay attention to the details ignored and create the corresponding logic. Many researchers at home and abroad believe that the application of data science in multimodal learning of investment psychology and behavior research can reduce the symptoms of cognitive impairment, but the degree of improvement has not been verified.

Objective: To analyze the intervention effect of multimodal learning applied by data science to investment psychology and behavior research on cognitive impairment under the promotion of cognitive impairment, in order to improve the cognitive problems of cognitive impairment.

Research objects and methods: Patients with mild cognitive impairment in two regions were selected as