

education. How to realize the cultivation of students' mental health on the basis of improving students' professional level is a problem that needs to be solved in college education. In the research, in order to improve students' professional performance and alleviate students' negative emotions at the same time, taking electrical automation control students as the research object, PLC technology is introduced to carry out course teaching, and the changes of students' anxiety emotions under the optimization of course teaching are analyzed. The results showed that the anxiety of the students who accepted the PLC technology teaching decreased more significantly, and their cognitive ability improved more significantly. The above results show that in the teaching of electrical automation control, the introduction of PLC technology can improve students' cognitive ability and reduce students' anxiety. Therefore, in college teaching, we can alleviate students' negative emotions by improving students' cognition.

Table 1. Anxiety score and cognitive ability evaluation of two groups of students

Index	Anxiety score		Cognitive ability	
	Before teaching	After teaching	Before teaching	After teaching
Research group	64.32±4.67	44.36±3.72	20.37±2.62	26.78±2.82
Blank group	64.73±4.19	56.38±3.26	21.48±2.75	23.18±2.27
<i>t</i>	1.287	8.364	0.943	4.316
<i>P</i>	0.576	0.011	0.114	0.032

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RESEARCH ON THE INFLUENCE OF VIDEO CONTENT ANALYSIS BASED ON CONVOLUTIONAL NEURAL NETWORK ON AUDIENCE'S PSYCHOLOGICAL COGNITION

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Background: Cognitive psychology is often used to analyze the processing of information collected by human senses in the brain and the formation of subsequent thinking. It is an interdisciplinary subject combining brain Aeromedicine, traditional psychology and sociology. The research object of cognitive psychology mainly focuses on people's high-level thinking processes, such as perception, attention, memory, language, etc. in contrast to traditional psychological theories, the research scope of cognitive psychology also includes processes that cannot be directly observed, such as reasoning logic based on observed information, storage and extraction of environmental information, etc. Cognitive psychology pays more attention to the internal psychological causes of human behavior, but the process from psychological state to behavior cannot be directly observed. Therefore, psychologists can only speculate and verify this process through the information received by the observed object and the generated behavior. This is also the reason why the research process in the field of cognitive psychology often needs to assemble various social experiments, because social experiments can provide relatively objective data support for the speculation process and conclusions. Specifically, the commonly used experimental methods in cognitive psychology include questionnaire survey, Delphi, interview and so on. With the popularity of 4G networks and smart phones, entertainment and social networking based on short video are gradually known by the world. The application of artificial intelligence technologies such as convolutional neural network in various fields of human life and work will also have a great impact on the development of the short video industry. Because convolutional neural network can be used to build a similarity judgment system for short videos, so as to recommend short videos that users prefer, and increase the user stickiness and loyalty of applications. However, this recommendation method will also bring some unknown effects on the psychological cognition of the audience. In order to reduce its negative effects as much as possible, this study attempts to design experiments to explore the current situation and reasons of the role of short videos based on convolutional neural network recommendation system on the audience.

Subjects and methods: Recruit a group of personnel with more than 5 years' working experience in short

video algorithm to form a technical team to build a short video recommendation system based on convolutional neural network, then download at least 100000 short video data on entertainment, gender, sports, learning, family, friendship and other topics from the public data platform without copyright disputes, and build a mobile phone application used in the experiment. Then, 100 adults aged 18-65 without the habit of using the short video application were selected from China as the research objects. They were required to use the short video application at least 5 times a week for at least 30 minutes each time. The experiment lasted for 3 months. MMSE (Mini Mental State Examination) surveys were conducted on all subjects before the experiment, in the first month, in the second month and in the third month after the experiment (i.e., after the experiment). Moreover, MMSE score data should be displayed in the form of mean \pm standard deviation, and t-difference significance test should be carried out. The significance level is set to 0.05

Results: After the 3-month experimental period and investigation, the researchers collected all the test data and removed the invalid samples. Input the remaining valid samples into the computer, and use Amos23.0 software for statistics, and then sort out Table 1.

Table 1. MMSE scores of subjects in short video usage experiment

Project	Before the experiment	The first month after experiment	The second month after experiment	The third month after experiment
Score	28.6 \pm 2.4	28.1 \pm 2.6	27.4 \pm 2.3	25.3 \pm 2.0*
Psychological cognitive level	Normal	Normal	Normal	Mild cognitive impairment

The “*” in Table 1 indicates that the difference between this test and the test data before the experiment is statistically significant. It can be seen from Table 1 that with the progress of the experiment, the MMSE scores of the subjects showed a downward trend as a whole, and after the third month of the experiment, the MMSE scores of the respondents were significantly different from those before the experiment. The average scores of the two groups were 25.3 and 28.6 respectively, belonging to mild cognitive impairment and normal cognitive psychology, and the former was 3.3 points lower than the latter.

Conclusions: Short video applications, especially short video applications that combine artificial intelligence technology to build a recommendation system, will have a great impact on users' cognitive psychology. In order to explore the specific situation of this impact and put forward some useful suggestions, this study has carried out a social experiment based on the use of short video. The experimental results showed that the MMSE scores of the subjects showed a downward trend as a whole with the progress of the experiment, and after the third month of the experiment, the MMSE scores of the respondents were significantly different from those before the experiment. The average scores of the two groups were 25.3 and 28.6 respectively, belonging to mild cognitive impairment and normal cognitive psychology. It shows that long-term frequent use of short video applications based on convolutional neural network recommendation system will reduce the cognitive psychological level of users, and may even make users suffer from cognitive disorders to varying degrees. Therefore, this study proposes that the government should issue relevant policies to require short video companies to provide customizable functions of forcibly restricting the use time of applications to minors and groups with self-discipline needs, so as to reduce the negative impact of short video applications on them.

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RESEARCH ON THE INFLUENCE OF CHINESE TRADITIONAL CULTURE INTEGRATING INTO COLLEGE STUDENTS' IDEOLOGICAL AND POLITICAL EDUCATION ON RELIEVING COLLEGE STUDENTS' PSYCHOLOGICAL PRESSURE

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Background: Nowadays, college students are in the early stage of youth. This stage is the most active stage of life centered change, and it is also a period of psychological contradictions and stress. Some studies