

## **CREATING OF A MODEL FOR TEACHING AESTHETIC EXPERIENCE TO COLLEGE STUDENTS USING ARTIFICIAL INTELLIGENCE AND VIRTUAL REALITY**

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## **СОЗДАНИЕ МОДЕЛИ ОБУЧЕНИЯ ЭСТЕТИЧЕСКОМУ ОПЫТУ ДЛЯ СТУДЕНТОВ КОЛЛЕДЖА С ИСПОЛЬЗОВАНИЕМ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА И ВИРТУАЛЬНОЙ РЕАЛЬНОСТИ**

В этом исследовании изучается интеграция искусственного интеллекта (AI) и виртуальной реальности (VR) в художественное образование для улучшения эстетического опыта студентов университетов. С помощью экспериментального дизайна изучается, как персонализированное обучение на основе AI и иммерсивные среды на основе VR влияют на художественное творчество, оценку и инновационное мышление. Эмпирические результаты показывают, что интеграция AI и VR улучшает эстетическое восприятие и творческие способности студентов, одновременно способствуя междисциплинарному исследованию. Однако сохраняются такие проблемы, как высокая стоимость и ограничения оборудования. В этом исследовании предлагается новая модель обучения и даются идеи для будущего применения AI и VR в художественном образовании.

Virtual reality (VR), as an immersive technology, can provide a new art education experience. By simulating the real environment, VR enables students to gain a more intuitive and interactive experience in art creation and appreciation. The research shows that VR has unique advantages in spatial perception, color application, etc., and can help students explore artistic creation more freely [1]. However, the application of virtual reality technology also faces hardware limitations and cost issues, which affect its popularity in art education.

Artificial intelligence (AI) can provide precise teaching support through data analysis and personalized recommendations. In art education, AI has been used to provide students with personalized creative guidance and feedback to help improve their artistic abilities. AI technology also shows potential in the evaluation of art works and art appreciation, providing students with automatic evaluation of the quality of their works through image recognition [2]. Despite this, the application of AI in art education still faces challenges of creativity and ethical issues.

Aesthetic experience is one of the core contents of art education and directly affects students' artistic literacy. Traditional art education cultivates students' aesthetic abilities through observation and imitation, while the combination of VR and AI provides more immersive and personalized aesthetic education. The research shows that immersive virtual environments can significantly enhance students' aesthetic feelings and stimulate their artistic creativity, while AI optimizes aesthetic education through personalized recommendation of artworks [3].

This study adopted an experimental research design to compare the differences in aesthetic ability and artistic creation between the experimental group using the integrated teaching model of AI and VR and the control group using traditional teaching methods. The "pre-test-post-test" design was used to evaluate the learning effects of the two groups of students and analyze the impact of the AI and VR integration model on students' aesthetic experience.

The research subjects were college students majoring in art at Xi'an Jiaotong Engineering College, who were randomly divided into an experimental group (30 people, using the AI and

VR integration model) and a control group (30 people, using traditional art teaching). All students took an aesthetic ability test before the experiment to ensure that the two groups of students were equivalent at the initial level.

Research tools:

1. Aesthetic ability test. It evaluates students' ability to understand and analyze works of art, covering aspects such as artistic style and color matching.

2. Evaluation of creative works. It evaluates students' creative innovation, artistic expression, etc. through a scoring scale.

3. Questionnaires and interviews. They collect students' feedback on the learning experience, especially their feelings about immersion, interactivity and personalized learning paths.

4. Behavioral data collection. It records the operational data of students in the experimental group in the virtual environment, such as the frequency of creation and the degree of interaction, and analyzes the relationship between learning behavior and the improvement of aesthetic ability.

The experiment lasted for four weeks and was divided into the following phases:

1. Early preparation. It includes a preliminary aesthetic test to ensure that the two groups of students are of equal skill; includes AI and VR platform operation training for the experimental group.

2. Teaching implementation. The experimental group uses AI and VR platforms for learning, including virtual art exhibitions, personalized creative guidance, etc.; the control group uses traditional art teaching.

3. Data collection. Data are collected through regular aesthetic ability tests, work evaluations, questionnaires and behavioral data analysis.

4. Late stage of the experiment. The final test and work evaluation will be conducted four weeks later to collect subjective feedback from students.

Data analysis methods:

Quantitative analysis:

Use a paired-samples test to compare the pre- and post-test results and analyze the changes in aesthetic ability between the two groups.

Analysis of variance (ANOVA) compared the differences in artistic creation performance between the two groups.

Behavioral data analysis evaluates the interactivity and participation of AI and VR teaching models.

Qualitative analysis: content analysis of questionnaire and interview data were conducted to identify students' evaluations of the teaching model, especially its impact on aesthetic experience and creative ability.

Based on the integration of AI and VR technology, this study explores its application in art education and the improvement of students' aesthetic experience. Through experimental research and technical analysis, this paper draws the following main conclusions:

1. The combination of AI and VR technology provides a new teaching model for art education. VR allows students to participate in art creation and appreciation immersively through immersive experience, enhancing students' aesthetic perception and artistic experience. AI improves students' creative abilities and artistic expression through personalized guidance and real-time feedback. Through the integration of these two technologies, students can not only obtain a more intuitive creative experience, but also receive personalized feedback during the creative process to optimize their artistic skills.

2. The combination of AI and VR technology promotes the formation of personalized learning paths. Students can create art according to their personal interests and learning progress in the virtual environment. At the same time, AI provides targeted creative suggestions and real-time feedback to help students improve their works more effectively and enhance their aesthetic and creative abilities. In addition, virtual art exhibitions and immersive creative environments provide students with a unique artistic experience, allowing students to observe and understand the unique features of different works of art in virtual space, deepening aesthetic cognition.

3. The integration of AI and VR is not limited to the creation of traditional art forms, but also expands students' artistic expression methods. For example, students can not only create paintings and sculptures in the virtual environment, but also try to combine music, dance and other art forms to conduct interdisciplinary artistic exploration. This diverse creative approach inspires students' innovative thinking, promotes the cross-border integration of their artistic creation, and enhances students' artistic perception and creativity.

Overall, the combination of AI and VR technology brings rich possibilities to art education, which not only promotes personalized art learning paths, but also helps students stimulate innovative thinking in interdisciplinary creation. Despite the challenges it faces, this model undoubtedly provides new directions and new teaching methods for the future development of art education.

### **Literature**

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### **INCREASING THE EFFECTIVENESS OF THE INFLUENCE OF ACADEMIC ACHIEVEMENTS ON THE INTELLECTUAL DEVELOPMENT OF TEENAGERS**

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### **ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ВЛИЯНИЯ УЧЕБНЫХ ДОСТИЖЕНИЙ НА ИНТЕЛЛЕКТУАЛЬНОЕ РАЗВИТИЕ ПОДРОСТКОВ**

Teen age is one of the key stages in the development of personality, when there is an active formation of intellectual abilities, cognitive processes and social skills. During this period, academic achievements play an important role in the intellectual development of students, as they contribute to the development of critical thinking, creativity, the ability to analyze and synthesize information. However, in order for academic achievements to really have a positive impact on the intellectual development of adolescents, it is necessary to create certain pedagogical conditions. This article considers the main pedagogical conditions that contribute to increasing the effectiveness of the influence of academic achievements on the intellectual development of adolescent students.

Teenagers are characterized by increased emotionality, a desire for independence and self-affirmation, as well as the active development of abstract thinking. In order for academic achievements to contribute to intellectual development, teachers need to take these features into account. For example, it is important to provide adolescents with the opportunity to