Exploration of Teaching Models for Basic Computer Courses in Media Universities Empowered by Artificial Intelligence

Yang Yan

Communication University of China, Nanjing Nanjing, Jiangsu 211172

Abstract: As artificial intelligence technology continues to penetrate the field of education, computer foundation courses in media universities face innovative demands in teaching concepts, methods, and evaluations. In order to meet the dual needs of media students for technological learning and application innovation, this paper focuses on the path of empowering through artificial intelligence. It first analyzes the core significance of AI in teaching this course, and then explores directions for innovative teaching models from dimensions such as teaching philosophy, methods, resource platforms, and evaluation systems, thereby seeking ideas for improving the quality of course instruction.

Keywords: Artificial Intelligence; Media-oriented universities; Basic computer courses; Teaching mode

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Introduction

At present, the media industry is deeply integrated with artificial intelligence, which raises higher requirements for the computer literacy of practitioners. However, there are some problems with the basic computer courses in media colleges, such as fixed teaching models, homogenized resource supply, and single evaluation dimensions. These issues make it difficult for the courses to meet the professional development needs of students and the standards of industry practice, creating an urgent need to use AI technology to address teaching pain points and promote systematic reform of the curriculum teaching system.

The significance of empowering computer basic courses in media universities with artificial intelligence.

Intelligent teaching tools play a key role in improving teaching efficiency, such as automatic homework grading and intelligent question-and-answer systems. These tools allow teachers to free themselves from tedious repetitive tasks and invest more energy into teaching design and personalized guidance for students. Artificial intelligence has also proven to be highly effective in stimulating students' interest in learning. It greatly enriches teaching methods, such as creating immersive virtual practice scenarios that make students feel as if they are in a real media work environment, allowing them to personally experience the charm of computer technology in media creation and dissemination, transforming abstract and obscure computer knowledge into vivid and concrete experiences. Additionally, artificial intelligence can cater to the personalized learning needs of media students by accurately providing suitable learning resources based on their learning progress and knowledge mastery, helping students fill knowledge gaps and enhance their professional strengths, thus laying a solid foundation for their future innovative work in the media field utilizing computer technology, in line with industry high standards for versatile media talents.

2.Exploration of Innovative Teaching Models for Basic Computer Courses in Media Universities Empowered by Artificial Intelligence

2.1 The Shift in Teaching Philosophy

2.1.1 Transition from teacher-led to student-centered

In the past, the classroom was generally dominated by teachers, with students mostly in a passive state of receiving knowledge, making it difficult to stimulate students' initiative and creativity. Nowadays, artificial intelligence, with its powerful data analysis capabilities and personalized service skills, can create tailored learning

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paths for each student based on their learning habits, levels of knowledge mastery, and so on. For example, intelligent learning systems can analyze students' answering situations and precisely push learning resources that target weak knowledge points. The role of teachers has also shifted from being knowledge dispensers to learning facilitators, organizing discussions in class, answering students' questions, and encouraging students to independently explore the application of computer knowledge in the media field. For instance, guiding students to use AI tools to design media projects helps them grasp knowledge through practical experience and truly become the main agents of their own learning, enhancing their abilities in autonomous learning and problem-solving.

2.1.2 Emphasizing problem-oriented and project-driven learning

The current media industry has a very urgent demand for versatile technical talents. In this situation, artificial intelligence has brought new vitality to the computer foundation courses in media colleges, enabling problem-oriented and project-driven learning concepts to be effectively implemented. This implementation process can be specifically initiated from two aspects.

On one hand, the design of the problems focuses on the actual pain points in media work, using AI technology's analytical capability on industry data to extract practical issues closely related to computer knowledge, such as "how to use Excel pivot tables to organize media platform user behavior data" and "how to use basic Python code for batch processing of news materials." This allows students to clearly feel the application value of knowledge when solving problems, rather than merely memorizing theoretical content mechanically. On the other hand, project-driven learning relies on AI tools to build a closed-loop practical system. Teachers design a tiered project based on the media specialization, such as "creating a data visualization report for campus new media accounts" and "basic applications of AI subtitle generation tools." Students obtain support for project cases and operation tutorials from the AI resource platform and complete corresponding tasks at different stages. In this process, they can master basic computer skills and cultivate full-process thinking from project planning to implementation, which aligns with the media industry's requirements for practical abilities.

2.2 Innovation in Teaching Methods

2.2.1 Intelligent Hybrid Teaching Design

In order to meet the learning needs of media students for computer knowledge in both 'theory and practice,' artificial intelligence technology has prompted blended teaching to evolve from the simple addition of 'online and offline' to a more targeted and intelligent design.

Before the course begins, the AI learning platform will push different preview content according to the students' major directions, such as journalism editing and film production. For example, for students in film production, videos like "Introduction to Computer Graphics Basics and AI Editing Tools" will be recommended, whereas for journalism students, case studies such as "Data Table Processing and News Topic Analysis" will be pushed. Preview questions will be used to assess the effectiveness of the preview and generate learning reports so that teachers can adjust the classroom focus. During the course, teachers will not only explain theoretical knowledge but will also conduct group collaboration practice activities based on the weaknesses of students identified through real-time feedback from AI. For instance, they will guide students to use the tools previewed before class to complete small tasks like "Batch Labeling of Short Video Materials" and "Creating News Data Visualization Charts," while the AI interaction system will provide real-time answers to questions students encounter during operations. After the course ends, the AI platform will push extension tasks that connect with classroom practice, and it will automatically grade assignments and analyze errors to create personalized review plans, thus forming a complete learning loop in blended teaching.

2.2.2 AI-driven classroom interaction and practice simulation

Students in media studies have concrete and practical learning characteristics. AI technology brings new forms

to classroom interaction and practical simulations in foundational computer courses. In the interactive segment, the AI interaction system can capture real-time feedback from students, like using response devices to gather students' understanding of "media data statistical formulas," quickly generating answer analysis charts. Teachers can then quickly identify the knowledge blind spots of most students and adjust the teaching pace accordingly. Furthermore, the system supports anonymous student questions, breaking the time and space limitations of traditional classroom interactions, allowing more students to participate in discussions. In terms of practical simulation, the AI-built virtual media scenarios can replicate real work processes, such as simulating the scene of "media public opinion data processing." In a virtual environment, students can apply their basic computer data analysis skills to filter and organize public opinion data, with the system providing real-time feedback on their operations and offering optimization suggestions, helping students master knowledge application methods in a zero-risk practice environment.

2.3 Teaching Resources and Platform Construction

2.3.1 AI-based personalized learning resource recommendation

Students in media universities have diverse professional orientations, and their demands for computer knowledge have different emphases. Based on this, personalized learning resource recommendations using AI have begun to emerge. AI algorithms can conduct detailed analyses of the behavioral data left by students on learning platforms, such as study duration, click preferences, and homework completion status, to accurately understand each student's level of knowledge mastery and interests. This allows for the creation of tailored resource combinations for each student, changing the previous model of a 'one-size-fits-all' resource supply.

Taking students in the field of news editing and reporting as an example, when a student is learning about data visualization, if they frequently click on tutorials for creating bar charts and line graphs, the AI system can capture this preference. In addition to pushing advanced content on basic chart creation, it will also recommend supplementary materials such as 'Case Studies on In-depth Mining of News Data and Visualization' and online courses that use Python to implement complex news data visualization, helping students integrate computer skills into their professional study, aligning with their practical operational needs in processing and presenting news data.

2.3.2 Application of Intelligent Experimental Environment and Virtual Simulation Platform

Intelligent experimental environments and virtual simulation platforms can overcome the limitations of practical aspects in basic computer courses at media universities, using artificial intelligence to recreate real scenarios. For example, journalism students can simulate public opinion data analysis on the platform, with AI providing real-time feedback on any issues that arise during operations; film and television students can virtually debug editing parameters, repeatedly practice without equipment costs, and quickly enhance their ability to apply computer skills in media contexts.

2.4 Optimization of the Teaching Evaluation System

Artificial intelligence promotes a transformation in the evaluation system of basic computer courses in media-related universities, shifting from the previous singular result-based evaluation to a 'process-result' multi-dimensional evaluation model. AI can track students' data in real-time during classroom interactions, homework completion, and project practices, using quantitative analysis to clarify students' strengths and weaknesses in the learning process, avoiding the reliance on final exam scores alone to judge students' abilities. AI can quickly generate personalized evaluation reports, which provide a basis for teachers to adjust their teaching strategies, while also allowing students to clearly understand their knowledge gaps. Taking media data processing projects as an example, AI can score performance from multiple dimensions such as data accuracy and proficiency in using tools, making the evaluation more aligned with the practical needs of the course while also being more objective and comprehensive.

3.Conclusion

Artificial intelligence brings new vitality to the teaching of basic computer courses in media-related universities. It reshapes teaching models in multiple aspects such as changes in teaching philosophy, innovative methods, resource platform construction, and optimization of evaluation systems. This exploration can address the issues of traditional teaching, improve the quality of course instruction, and help students acquire computer skills that meet the needs of the media industry, cultivating versatile talents who are both technically proficient and practically capable in the media field, thereby continuously advancing the course towards high quality development.

References:

[1] Chu Shaoqing.Exploration of the Application of AI Technology in the Teaching of Basic Computer Courses.[J]. Information and Computers,2025,37(15):152-154.

[2] Lv Gelin,Yan Hui,Cao Yuehui,et al.Teaching Design and Practice of the'University Basic Computer'Intelligent Course Under the Background of Artificial Intelligence.[J].Industrial and Information Technology Education,2025,(07):55-61.

[3] Xu Jing.Research on the Reform of Teaching Basic Computer Courses in Higher Vocational Education Under the Background of Artificial Intelligence.[J].Information and Computers,2025,37(12):227-229.