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Research on the Relationship between the Career Development Path of University Media Teachers and Educational Reform under the Background of Artificial Intelligence

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Abstract: The rapid advancement of artificial intelligence (AI) technology has profoundly transformed the media industry and triggered a deep-seated evolution in media education within higher education institutions. This study focuses on university media educators to explore the interplay between their professional development and educational reform in the context of AI. The findings reveal a dialectical relationship of mutual support and synergy: educational reform provides strategic direction and resource support for teacher development, while teacher development serves as a key driving force behind the implementation of educational reform. By analyzing the impact of AI on media education and identifying core pathways for teacher career growth, this paper proposes strategies for coordinated development, offering reference insights for universities to adapt to technological changes and cultivate talents suited for the intelligent era.

Keywords: Artificial intelligence; College media major; Teacher career development; Educational reform; Coordinated development

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1. Introduction

1.1. Research Background and Significance

With the widespread application of AI technologies such as ChatGPT, intelligent writing systems, and algorithmic recommendation engines in the media sector, significant transformations have occurred in media production models, communication logic, and talent demands. Traditional linear workflows—such as "gathering, writing, editing, and evaluating"—have been restructured by intelligent tools. Emerging practices like data-driven content creation, personalized information delivery, and virtual digital human broadcasting are increasingly becoming mainstream. These shifts necessitate urgent reforms in media education at universities. As central actors in educational processes, the adaptability of teachers' professional competencies directly influences the effectiveness of educational reform.

Against this backdrop, it is both theoretically and practically significant to investigate how university media educators can construct career development paths aligned with the AI era and to examine the intrinsic link between these paths and educational reform. Theoretically, this research enriches academic discourse on the interaction between technological

change, teacher development, and educational innovation. Practically, it offers actionable strategies for universities to enhance faculty construction and advance teaching reforms in media disciplines.

1.2. Current Research Status at Home and Abroad

International research on AI and media education began earlier, focusing on areas such as the integration of technology into curricula [1] and the cultivation of digital literacy among educators [2], emphasizing interdisciplinary approaches in media education reform. Domestic studies primarily address the integration of intelligent technologies into media majors [3] and the necessity of transforming teacher capabilities [4]. However, systematic investigations into the connection between teacher career development and educational reform remain limited, and a mature theoretical framework has yet to be established.

1.3. Research Ideas and Methods

This study employs literature review, logical analysis, and case studies. A conceptual framework for teacher professional development and educational reform under the AI paradigm is constructed through a synthesis of domestic and international literature. Drawing on reform initiatives from multiple Chinese universities, this paper analyzes the interactive mechanisms between teacher development and educational reform, ultimately proposing strategies for coordinated development.

2. The Impact and Challenges of Artificial Intelligence on Media Education in Colleges and Universities

2.1. Intelligent Transformation of the Media Industry

AI is reshaping the media ecosystem. In content creation, automated writing tools (e.g., Xinhua News Agency's "Kuaibi Xiaoxin") generate structured reports in fields such as finance and sports, freeing journalists from repetitive tasks. During dissemination, algorithmic recommendation systems (e.g., Toutiao) enable precise content distribution based on user profiles, replacing traditional one-to-many models. In user interaction, technologies like virtual anchors and AI-powered customer service enhance real-time engagement and immersive experiences. These developments demand that professionals possess not only traditional media skills but also data literacy, algorithmic understanding, and collaborative abilities with intelligent systems.

2.2. Adaptive Challenges in University Media Education

Despite industry transformation, media education in universities lags significantly. Most institutions still emphasize traditional skill-based courses such as reporting, writing, editing, and criticism, lacking cutting-edge offerings in AI and big data analytics. This disconnect results in graduates whose knowledge does not align with industry needs. Teaching methods remain largely lecture-centered, failing to foster practical or innovative skills required for project-based learning and cross-disciplinary collaboration. Evaluation criteria also lag, prioritizing academic publications and exam scores over assessments of technical proficiency and critical thinking.

2.3. Pressures on Teacher Role Transformation

As key agents of educational reform, teachers face threefold challenges. First, many lack sufficient knowledge of AI technologies, limiting their ability to teach emerging subjects. Second, modern pedagogy requires mastery of AI-assisted tools (e.g., virtual simulation platforms) and the design of interdisciplinary projects, posing new demands on instructional design. Third, academic research is shifting toward topics such as intelligent communication and algorithmic ethics, compelling teachers to adapt their research directions accordingly.

3. Core Paths for the Professional Development of University Media Teachers under the Background of Artificial Intelligence

3.1. Cross-Disciplinary Reconstruction of Knowledge Structure

In the AI era, media educators must develop an integrated knowledge system combining media, technology, and humanities. Technologically, they should master foundational concepts in AI, big data analysis, and algorithmic logic, along with tools such as Python and SQL. They should also understand the operational principles of intelligent communication tools. Academically, they need to expand beyond traditional journalism theory to explore intelligent communication dynamics, including the influence of algorithms on public opinion and the communication mechanisms of virtual influencers. Additionally, they must critically engage with issues such as AI ethics, data privacy, and algorithmic bias to preserve humanistic values amid technological rationality.

3.2. Iterative Enhancement of Teaching Competence

Teachers must transition from knowledge transmitters to innovation facilitators. Pedagogically, they should adopt project-based learning (PBL) to guide students in using AI tools for real-world tasks, such as generating news features via algorithms or designing virtual anchor live-streaming plans. Technologically, they should proficiently use AI-assisted platforms—for instance, leveraging intelligent assessment systems to analyze student performance or employing virtual simulations to recreate news scenarios. Collaboratively, they should work with experts in computer science, psychology, and sociology to co-develop interdisciplinary courses such as "Ethics of Intelligent Communication" and "Data Journalism and Social Governance," breaking down disciplinary silos.

3.3. Expansion of Research Capabilities in Targeted Areas

Educators must align their research with the frontiers of intelligent media. Applied research could focus on AI's role in news production, public opinion monitoring, and user behavior analysis—for example, developing natural language processing-based sentiment analysis models. Ethical and societal research should address issues like algorithmic discrimination, information bubbles, and deepfake risks. Interdisciplinary research should integrate media studies with social sciences and technical fields, such as using big data to explore the psychological drivers behind communication phenomena.

3.4. Deepening Practical Engagement

To bridge academia and industry, teachers must strengthen practical experience. Opportunities include internships in AI-focused departments of leading media organizations (e.g., People's Daily New Media Center or ByteDance's algorithm team), participation in intelligent news production and algorithm optimization projects, and collaboration with media enterprises to develop tools like news robots and public opinion analysis systems. Additionally, providing consulting services for government and corporate clients—such as optimizing official media algorithms or designing intelligent public opinion monitoring plans—can enhance problem-solving capabilities.

4. The Interactive Relationship between Teachers' Professional Development and the Reform of Media Education in Colleges and Universities

4.1. Teachers' Professional Development as the Internal Driving Force for Educational Reform

Teacher development plays a pivotal role in advancing educational reform. Curriculum reform benefits from teachers' interdisciplinary expertise. For example, those skilled in data journalism can introduce courses like "Fundamentals of Data Journalism" and "Visual Communication," addressing gaps in traditional offerings. Educators with algorithmic knowledge can lead the development of forward-looking courses such as "Introduction to Intelligent Communication" and "Algorithmic Ethics," ensuring curriculum relevance.

Teaching model innovation is driven by enhanced pedagogical capabilities. Proficiency in AI-assisted tools enables a shift from traditional lectures to human-machine collaborative instruction. Teachers can assign personalized learning tasks via intelligent platforms and adjust teaching strategies based on data analytics. Project-based learning allows students to apply AI tools to real-world problems, fostering experiential learning.

Talent cultivation goals evolve as teachers gain industry insights. Those involved in virtual anchor operations may incorporate skills like "digital human content planning" and "real-time interactive technology application" into training objectives, better aligning graduate competencies with industry expectations.

4.2. Educational Reform as External Support for Teacher Development

Reform policies provide directional guidance for teacher development. Institutional initiatives such as the "Intelligent Communication Talent Cultivation Plan" define capability requirements and offer clear developmental pathways. For instance, some universities mandate that teachers complete training in AI fundamentals and data tools within three years, prompting proactive knowledge updates.

Resource allocation ensures the feasibility of professional growth. Reforms often involve increased investment in teacher development funds, interdisciplinary platforms, and industry-university practice bases. These resources allow teachers to attend international conferences, collaborate across disciplines, and participate in real-world projects.

Evaluation mechanism reforms motivate continuous improvement. Shifts from research-centric to balanced assessments incorporating teaching, research, and practice encourage holistic development. Achievements in intelligent teaching tool development, interdisciplinary course design, and industry collaborations are now linked to promotions and performance incentives.

4.3. Symbiotic Relationship Between the Two

A synergistic dynamic exists between teacher development and educational reform. On one hand, reform creates institutional environments and resource conditions conducive to teacher growth. On the other, teacher enhancement propels deeper educational innovation. This mutually reinforcing cycle is evident in successful cases, such as Renmin University's School of Journalism, where reforms in intelligent communication were accompanied by teacher capacity-building efforts and curriculum innovations, forming a virtuous loop of "reform – development – further reform."

5. Strategies for Media Education Reform and Teacher Development from a Coordinated Development Perspective

5.1. At the Institutional Level: Establish a Supportive Reform Ecosystem

Universities should implement tiered teacher development programs tailored to different career stages. Young teachers benefit from foundational technology training through school-enterprise partnerships. Mid-career educators require cross-disciplinary enhancement opportunities, supported by collaborations with computer science and social science faculties. Senior teachers should lead major intelligent communication projects, cultivating institutional leadership.

Curriculum and teaching reforms should follow a "core + intelligent modules + practical projects" structure. AI-related content should be integrated into traditional courses (e.g., adding algorithmic logic chapters in "News Editing"), alongside elective modules like "Intelligent Communication Technology" and "Virtual Digital Human Production." Intelligent teaching labs equipped with tools such as news robots and virtual studios should be established to support immersive instruction.

Evaluation and incentive mechanisms must be diversified. Metrics should include achievements in intelligent teaching innovation, interdisciplinary course development, and industry-university-research collaboration. An "Intelligent Education Innovation Award" can recognize outstanding contributions, motivating ongoing reform efforts.

5.2. At the Teacher Level: Proactively Build Professional Competencies

Teachers should embrace lifelong learning, staying updated on AI trends through online courses (e.g., Coursera's "Artificial Intelligence and Journalism"), academic forums, and industry training. Active involvement in teaching reform—such as applying for AI-integrated teaching projects and experimenting with AI-assisted instruction—enhances pedagogical skills. Expanding cross-disciplinary networks through collaborations with technical experts and industry practitioners broadens professional horizons.

5.3. At the Industry and Societal Level: Provide Collaborative Support

Industry-academia partnerships should be strengthened. Enterprises like Tencent and The Paper should establish joint teacher training bases, offering technical workshops and project participation. Industry feedback should inform curriculum adjustments to ensure alignment with market needs. Professional associations, such as the China Journalists Association and the Journalism and Communication Committee of the China Higher Education Society, should set competency standards, develop training materials, and organize exchanges to standardize teacher development pathways.

6. Conclusions and Prospects

AI is fundamentally reshaping the landscape of media education in higher education. The synergy between teacher professional development and educational reform is essential for navigating this transformation. This study demonstrates that these two elements are interdependent, forming a dynamic relationship where reform guides development and development, in turn, drives reform. To thrive in this evolving environment, universities must build supportive ecosystems encompassing institutional design, resource allocation, and evaluation optimization. Meanwhile, teachers must proactively transform through knowledge reconstruction, skill enhancement, and cross-disciplinary collaboration.

Future research can further integrate the reform cases of specific institutions, and through quantitative research, analyze the correlation between teachers' career development and the effectiveness of educational reform, providing more targeted strategies for different types of universities. Meanwhile, as technologies such as generative AI continue to evolve, the career development paths for teachers and the content of educational reforms will also keep evolving. It is necessary to conduct continuous tracking and research to provide dynamic guidance for the cultivation of media talents in the intelligent era.

Disclosure statement

The author declares no conflict of interest.

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