

# *The Application Evolution of Generative Artificial Intelligence in the Media Field and the Path Influence on the Future Development of Universities*

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**Abstract:** Generative AI technology, born in the digital economy era, is characterized by its capabilities in automatic generation, multimodal processing, and cross-domain collaboration. The widespread adoption of this technology has prompted China's media industry to gradually break away from traditional development models, highlighting the transformative role of digital technologies in media evolution. This study examines the application and development of generative AI in media, analyzes how this technology drives the future growth of higher education institutions, and emphasizes the need for universities to cultivate high-quality talent to support the media industry's transformation in the new era.

## **1. Introduction**

For the media industry to achieve stable and orderly development, digital technology serves as an indispensable safeguard. In recent years, the integration of generative AI with media education in universities has deepened significantly, injecting new vitality into China's media industry. However, this trend also poses greater challenges to the educational philosophies and models driven by generative AI in higher education. Therefore, innovating educational approaches through AI technology should be regarded as a key strategy for cultivating interdisciplinary media professionals.

## **2. Evolution of Generative AI Applications in Media**

### **2.1 Simple Support Phase**

In the early developmental phase of generative AI, its application scope exhibited notable limitations, primarily serving to replace repetitive manual operations [1]. During its initial implementation, media professionals utilized generative AI to automate repetitive and standardized tasks, enabling automated collection and processing of raw data. This approach ultimately reduced material resource consumption and time costs for enterprises, thereby enhancing media companies' economic efficiency. Specifically, generative AI systems at this stage could replace operators in collecting raw text, audio, or video materials, aggregate the collected data, and apply linear

transformations to generate visualized audiovisual outputs. While the "purely auxiliary phase" of generative AI technology fully embodied the media industry's transformation goal of "feature engineering," it did not fundamentally alter the developmental trajectory of the media sector during this period [2].

The figure 1 below illustrates the initial structural model of generative AI integration with the media industry.

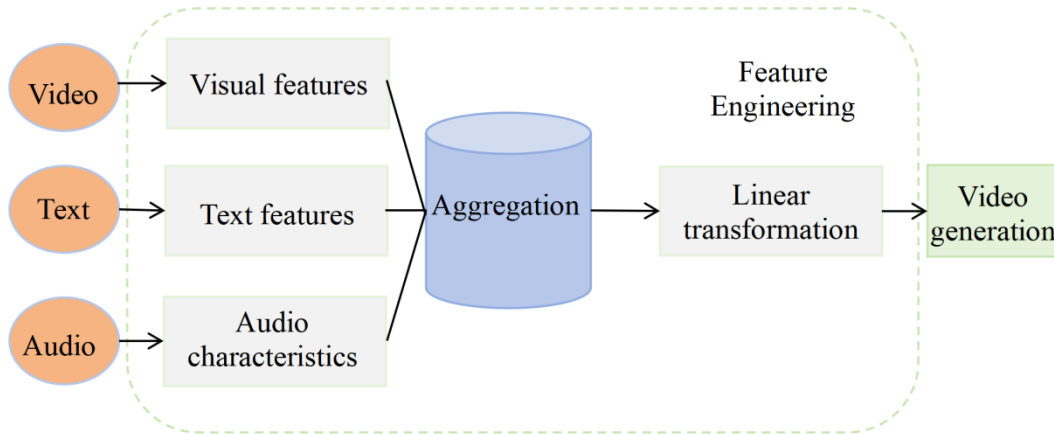


Figure 1: Early Structural Model of Generative AI and Media Industry Integration

## 2.2 Multimodal Fusion Phase

In recent years, generative AI technology has evolved toward multimodal integration, demonstrating its growing role in enhancing media production efficiency. Powered by generative AI platforms, enterprises can now comprehensively collect first-hand data across relevant fields. Using 3D modeling tools, they extract usable components from raw data and transform them into visualized audio or video content. These AI tools also assist technicians in identifying false information, helping media companies mitigate operational risks at the source. This highlights the technology's pivotal role in fostering the healthy development of the media industry [3].

The figure 2 below illustrates the mid-term structural model of generative AI integration with the media industry.

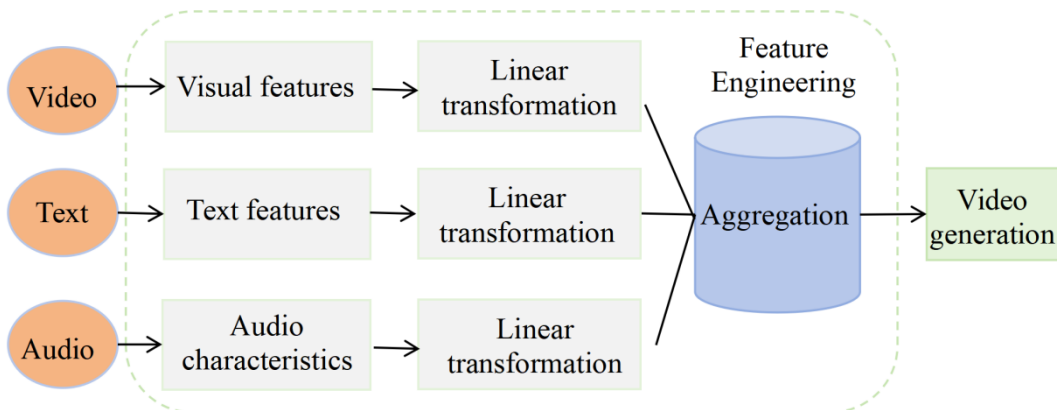


Figure 2: Mid-term structural model of generative AI and media industry integration

### 2.3 Agent-driven Phase

Through decades of evolution, generative AI technology has now entered a new era of "agent-driven" development. In this stage, intelligent agents with self-generating capabilities can fully replace human operators in media-related tasks such as topic planning, information integration, content creation, and operational performance feedback. They can also automatically generate matching micro-videos and other outputs based on corporate instructions. During the agent-driven phase, generative AI collects vast amounts of audio, video, and text data, which undergoes processes including feature extraction, content analysis, material retrieval, video editing, and rendering. The final results are then presented to audiences through virtual studios. This technology also breaks down rigid industry barriers, enabling deep integration between media, higher education, cultural tourism, e-commerce, and other sectors, thereby creating a new industrial landscape [4].

As shown in the figure 3 below, this is a deep integration model between generative AI powered by agents and the media industry:

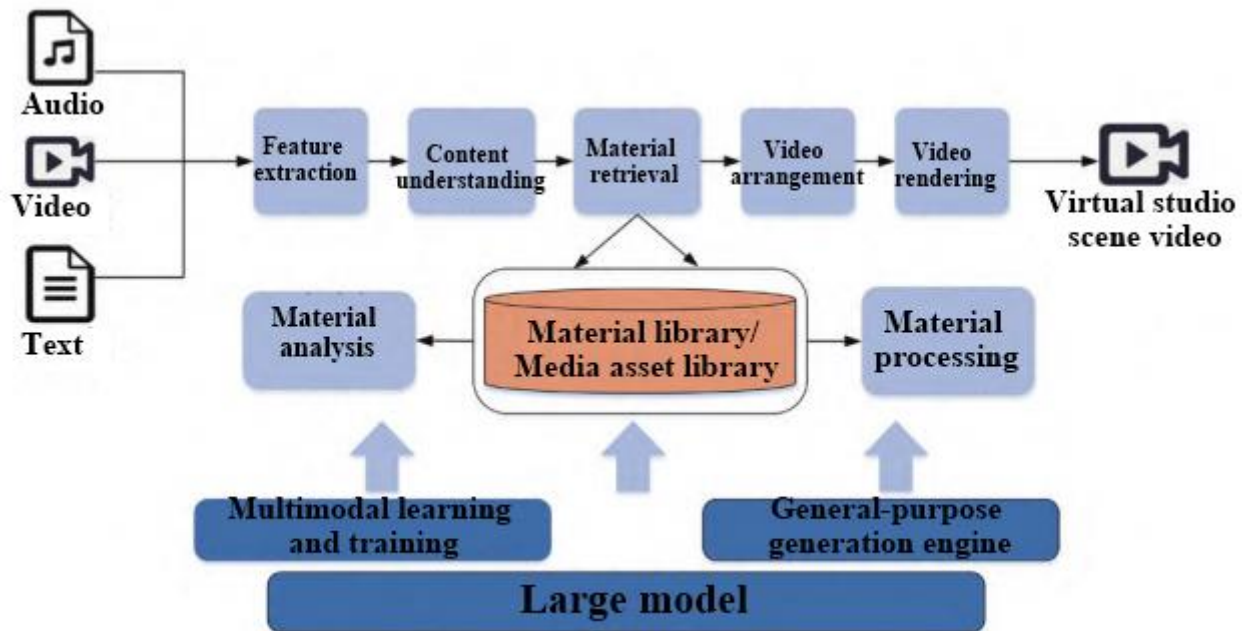


Figure 3: Deep Integration Model of Generative AI and Media Industry Driven by Agents

The table 1 below illustrates the technological evolution of generative AI in the media industry.

Table 1: Evolution of Generative AI in Media

Evolutionary stage	Simple adjuvant phase	multimodal fusion stage	agent driven phase
Specific characteristics	Replace simple, repetitive manual labor	Filter data, integrate information, and generate visualizations	Completely replace operators in topic planning, information integration and creation, and operational effectiveness feedback

## 3. The Impact of Generative AI on the Future Development Path of Universities

### 3.1 Higher Requirements for Talent Development

With the full arrival of the generative AI era, higher education institutions' media programs now

demand more sophisticated professional competencies. To effectively address the challenges posed by the media industry's transformation, university administrators and faculty must prioritize cultivating interdisciplinary talents while closely aligning with the practical needs of media enterprises. Under these circumstances, many existing talent development plans have become obsolete, requiring institutions to invest more resources and effort in adjusting their educational objectives [5]. Meanwhile, the infrastructure supporting both practical training and theoretical instruction in media programs urgently needs modernization. University authorities should allocate additional financial resources to ensure the creation of scenario-based training environments for students. To achieve the goal of nurturing versatile, practice-oriented, and innovative professionals, universities must closely align with the real-time dynamics of China's media market, focusing on developing new-generation media technology talents with rigorous logical thinking and strong practical skills [6].

### **3.2 Breaking down Departmental and Disciplinary Barriers**

Generative AI not only breaks down traditional barriers between academic departments but also enhances interdisciplinary communication across universities, integrating various faculties and disciplines into an indivisible whole. From the perspective of sustainable development in the media industry, generative AI technologies that embody the concept of "cross-disciplinary collaboration" can further strengthen university-enterprise communication, enabling real-time sharing of talent cultivation resources between institutions and enterprises. In recent years, many universities have been focusing on establishing innovative educational mechanisms that integrate humanities and sciences through interdisciplinary approaches, with increasing investments in faculty resources and funding costs in this field [7]. Promoting cross-disciplinary integration in media education models and transcending traditional professional boundaries can prevent the fragmentation of educational resources caused by disciplinary silos, laying a solid foundation for cultivating versatile media professionals.

### **3.3 Transformation of Course Teaching Methods**

The integration of generative AI platforms has enriched teaching methodologies in university media programs. Educators now leverage technologies like VR (Virtual Reality) and AR (Augmented Reality) to transform abstract media theories into immersive, three-dimensional scenarios that engage students. In this AI-driven era, media institutions prioritize practical training, equipping students with industry-ready competencies through hands-on courses [8]. For instance, universities have developed collaborative models with enterprises, providing students across all academic levels access to corporate training environments. Project-based media training courses systematically enhance practical skills while encouraging students to apply theoretical knowledge to real-world challenges. Through VR platforms, students gain access to hyper-realistic training spaces that simulate professional environments. These virtual studios allow immersive project-based learning, where students can role-play specific characters to reinforce media theory retention. Ultimately, AI technologies like VR and AR are revolutionizing rigid teaching frameworks while fostering deeper teacher-student interactions.

The figure 4 below illustrates a virtual reality teaching scenario in higher education, supported by generative AI tools.



Figure 4: A VR Teaching Scenario in Higher Education with Generative AI Tools

## 4. Transformation Measures of Universities under the Influence of Generative Artificial Intelligence

### 4.1 Reconstructing the Media Curriculum System

To reconstruct the curriculum system for media majors in higher education, the most fundamental approach lies in breaking through rigid teaching frameworks and closely aligning with market changes and transformation trends in the media industry. Current media programs should appropriately increase the proportion of practical training courses within the curriculum structure, integrating generative AI modules into both theoretical and practical teaching domains [9]. Educators should assign project-based collaborative learning tasks, guiding student teams to utilize generative AI digital tools for solving practical problems through division of labor and teamwork. University teachers must comprehensively assess students' gaps in mastering media course theories and practical skills based on actual learning conditions. Only through such measures can higher education institutions design media theory and practical training systems that better align with the generative AI era.

### 4.2 Accelerating Industry-Education Integration

Higher education institutions in media studies should strengthen communication with industry partners to achieve school-enterprise integration. It is essential to establish robust operational mechanisms for industry-education collaboration, while media companies should provide necessary training resources and infrastructure. Adopting customized talent development models and encouraging student participation in corporate internships are crucial. Universities must enhance career guidance for graduates, helping them stay updated on media market trends to facilitate smooth employment or entrepreneurship. Companies should assign dedicated trainers to assist graduates in adapting to new workplace environments and applying media theories to practical challenges. To accelerate this integration, it is vital to clarify responsibilities between institutions and enterprises, conduct thorough market research, and provide comprehensive career guidance.

### 4.3 Building a High-Quality Faculty

To build a high-quality faculty team for university media programs, institutions must better

address the challenges of digital-era media market transformation. Under this premise, university administrators should regularly organize practical training exchanges for faculty members and encourage young teachers to plan their future career paths. Universities should broaden recruitment channels for top-tier media educators while promoting continuous improvement in practical teaching skills [10]. Beyond these feasible measures, enhancing students' professional ethics remains crucial for media programs adapting to generative AI challenges. Given the highly open nature of internet information dissemination, malicious actors may exploit online platforms to steal corporate secrets, potentially causing financial losses. Therefore, media-focused universities should strengthen ideological and political education for students. Educators should guide students to voluntarily comply with industry competition regulations, prevent violations and illegal activities, and inspire them to adhere to professional ethics standards while safeguarding their own and others' legitimate rights.

## 5. Conclusion

In conclusion, generative AI in the digital era has demonstrated exceptional efficacy in driving media industry transformation and elevating higher education quality, highlighting the organic synergy between AI and sustainable media development. As digital technologies permeate the media sector, there is an increasing demand for interdisciplinary and practice-oriented professionals as core competencies. Universities should focus on cultivating next-generation media talent by leveraging big data, IoT, and cloud platforms to expand students' knowledge horizons. Furthermore, enhanced collaboration between academia and industry is essential to ensure a smooth industry transition, breaking down institutional silos and disciplinary barriers.

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