

# Dilemmas and Responses in Journalism and Communication Education from the Perspective of Intelligent Media: Postprint

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## Abstract

As artificial intelligence technology continuously penetrates the media industry, conventional models, processes, and production methods in journalism and communication are undergoing profound transformations, with intelligent media technologies—including VR news, robot writing, and big data analysis—gradually permeating the field. Under the overarching trend of “AI + News,” the concepts, models, and methods of journalism and communication education face enormous challenges and transformations. This paper, set against the backdrop of development trends in the intelligent era, examines the challenges posed by the current environment to journalism and communication education in China, and explores countermeasures and methods by integrating industry practices.

## Full Text

### The Dilemma and Response of Journalism Education from the Perspective of Intelligent Media

**Abstract:** As artificial intelligence technology continues to permeate the media industry, traditional journalism models, workflows, and production methods are undergoing profound transformation. Intelligent media technologies such as VR news, robot writing, and big data analytics are gradually infiltrating the field of journalism and communication. Under the overarching trend of “AI + Journalism,” the philosophy, models, and methods of journalism education face enormous challenges and changes. This paper examines the challenges confronting China’s journalism education against the backdrop of intelligent media development trends and explores countermeasures and approaches by integrating industry practices.

**Keywords:** intelligent media; journalism education; educational challenges; countermeasures and methods

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Artificial intelligence technology encompasses multiple subfields including big data, machine learning, image recognition, and neural networks. Intelligent media represents the product of AI technology's penetration into the media industry. Currently, intelligent media comprises four key technologies: (1) the Internet of Things as infrastructure; (2) big data as production factors; (3) mobile computing for optimizing resource matching; and (4) machine learning for accelerating intelligent evolution. From the perspective of journalism practice, intelligent media has already infiltrated various stages of news production, including lead discovery, information collection, content writing, content distribution, effect feedback, collaborative cooperation, and information processing. This will reshape the "business chain" of media production and subsequently influence the overall ecological pattern. For instance, during the 2018 National "Two Sessions," Xinhua News Agency employed AR (Augmented Reality) technology to interpret the government work report. On December 26, 2017, China's first media intelligence platform, "Media Brain," was officially launched by Xinhua News Agency. Media Brain provides services across eight modules, covering the entire news chain from leads and planning to interviewing, production, distribution, and feedback, empowering media through cloud computing, IoT, big data, and AI technologies.

Although technologies such as robot writing, data analysis, and sensor journalism are still in their infancy, the numerous changes they have brought to journalism have triggered industry reflection. While the news media industry actively embraces artificial intelligence, journalists and editors feel immense pressure, with alarming theories such as "the disappearance of reporters" emerging. As suppliers of media talent, university journalism education programs have incorporated more converged media elements through years of effort, yet they still lag behind when facing new challenges in the intelligent era. Therefore, adapting to media form innovation and transformation, improving journalism education, and cultivating new media talents that meet the needs of media development have become the main topics of research and practice for journalism majors in higher education institutions in the current and future periods.

## 1. Development Status

According to the latest survey data released by Tencent News, 681 universities in China have established 1,244 journalism undergraduate programs, with approximately 230,000 undergraduate students and about 7,000 faculty members. Domestic journalism undergraduate institutions have formed a basic consensus

on “integrated development, interdisciplinary learning, and cultivating applied talents.” Based on the curriculum systems of some universities, in addition to professional courses, journalism undergraduates are also required to take courses such as *Liberal Arts Mathematics*, *Computer Fundamentals*, and *Data Analysis*.

## 2. Challenges Faced

The development of intelligent media has brought significant changes to the previous content production model and media ecology centered on gathering and editing. Media gathering, editing, distribution, and operations all face process reengineering, which has also posed numerous challenges to journalism education.

### 2.1 Educational Philosophy Under Attack

The development of converged media has brought about a transformation in journalism education, shifting from “gathering, writing, editing, and commenting on a single platform” to “providing content across multiple platforms.” With the rise of intelligent media, the positioning of “content producer” alone can no longer meet market demands, and journalism education needs to be empowered with more technological capabilities. However, this process has also created new contradictions. Some universities overemphasize skill cultivation while neglecting deeper attention to students’ professional spirit and critical thinking. Years ago, at a forum of journalism school deans, Fan Yijin, Dean of the School of Journalism and Communication at Jinan University, warned academia that “journalism students are not news technicians.” In fact, although artificial intelligence possesses instrumental and technical rationality, it is not without value orientation. Toutiao, whose core competitiveness lies in intelligent algorithmic recommendation, employs a professional review team of 4,000 people, adopting a combination of manual review and technical identification. This demonstrates that while AI technology gradually penetrates the journalism industry, technology cannot override values. How to achieve human-computer interaction and how to guide technical rationality through human value judgment both pose higher challenges to journalism education.

### 2.2 Talent Cultivation “Supply-Demand Mismatch”

Domestic university journalism schools have established 140 network and new media programs. However, the media market still experiences a serious “supply-demand contradiction,” where students cultivated by journalism programs on the supply side cannot fully meet market demands, resulting in structural and capability mismatches. Judging from current media development trends, both new media companies and traditional media organizations generally need “generalist” new media talents who can not only produce converged media content but also excel in multi-platform distribution and integrated marketing, while simultaneously collaborating with technical teams in computer science, data

analysis, and visual communication. Currently, there are numerous journalism undergraduates nationwide, but their quality varies. While key universities have high-quality student sources, a large number of second- or third-tier institutions offering journalism programs, constrained by student quality, enroll mostly liberal arts students with weak mathematical foundations. Although some ordinary universities have offered courses such as *Data Mining and Analysis*, students find them quite challenging.

### 2.3 Teacher Quality Exhibits “Matthew Effect”

In terms of faculty quality and teaching model construction, a phenomenon similar to the “Matthew Effect” in sociology and economics has emerged, where the strong become stronger and the weak become weaker. Although in recent years, universities at all levels have basically set the threshold for journalism faculty at doctoral degrees or senior media practitioners with professional titles, due to influences from income, academic environment, development prospects, and other factors, superior teacher resources have concentrated in key universities and developed regions such as “Beijing, Shanghai, Guangzhou, and Shenzhen,” as well as the eastern coastal areas. The faculty quality and teacher competence in ordinary universities, especially private institutions, urgently need updating. On the one hand, some journalism faculty lack experience in new media content production and operation, resulting in a disconnect between theory and practice. On the other hand, most journalism faculty have liberal arts backgrounds. If they do not promptly update their knowledge systems to adapt to the rapid development of intelligent media, they will face the crisis of knowledge system obsolescence.

### 2.4 Hardware Environment Faces Upgrade

During the 2017 National Two Sessions, the Guangming Daily Newspaper Group launched “Xiao Ming AI Two Sessions” on its client platform, integrating facial recognition, image recognition, and speech recognition technologies. This marked the first time a domestic media outlet employed artificial intelligence to serve Two Sessions reporting. This demonstrates that in the intelligent media era, technology-driven content production has become the main trend. Universities must “grasp both aspects firmly” in talent cultivation, ensuring both “software” capabilities and “hardware” standards. For example, the Communication University of China established the Institute of Brain Science and Intelligent Media in 2013, targeting media as its research objective and fully leveraging the comprehensive advantages of science, engineering, and arts. In contrast, some journalism schools, constrained by funding issues, have slow experimental equipment updates, making it difficult to achieve a technology-driven converged media practice environment. This is also one of the reasons for students’ weak practical abilities.

### 3. Response Strategies

Currently, journalism programs in universities should seize the “window period” of intelligent media, carry forward the advantages of traditional journalism teaching, and keep pace with the times in cultivation philosophy, curriculum systems, and faculty strength, focusing on strengthening “one concept and two capabilities.”

#### 3.1 Media Practitioner Values Construction

The *Media Convergence Blue Book: China Media Convergence Development Report (2017-2018)* states that “artificial intelligence will help the media industry continue to evolve along the logic of platformization, intellectualization, and humanization. Certain problems that AI technology may trigger require value intervention by media practitioners, which is also where the competitiveness of future media practitioners lies.” Therefore, while emphasizing “change” in journalism education, we should also adhere to the concept of “unchange.” The development of new media has made it easier for the public to voice their opinions. Consequently, talent cultivation in journalism majors should firmly establish socialist core values, deepen professional competence, strengthen the “gatekeeper” identity of future media practitioners, and convey more positive social energy.

#### 3.2 Deep Content Production Capacity Building

In-depth reporting is an important indicator of media professionalism and a competitive advantage for traditional and mainstream media in the new media era. As artificial intelligence technology enters media platforms, in-depth reporting characterized by investigation, criticism, and speculation still possesses core competitiveness and may become a breakthrough point for exploring “human-machine collaboration” models in the future. Robot journalists possess the ability to quickly and accurately integrate information and analyze data, enabling them to publish short news within a short time. However, current AI technology is still in its infancy in terms of deep learning and emotional expression. Therefore, the in-depth excavation of “the news behind the news” requires human completion. Meanwhile, in the intelligent media era, objectivity and fairness remain the “pain points” for the public, so user demand for in-depth content is increasing rather than decreasing. Consequently, facing market demands, journalism programs should strengthen general education and technical concepts while enhancing students’ capacity for in-depth reporting. Simultaneously, professional teachers and scholars must continuously research media development patterns, improve teaching methods and approaches, and cultivate students’ abilities in in-depth interviewing, investigation, writing, and integration through flexible and diverse teaching methods that adapt to the times.

### 3.3 Cross-disciplinary Team Collaboration Capacity Building

In the intelligent media era, technology is replacing human labor in playing an increasingly important role. With the development of big data, cloud computing, and other technologies, content production, distribution, and user analysis are gradually becoming automated, and the business chain of media is undergoing structural changes, with technology's weight continuously increasing. Currently, the "journalist-editor + engineer" team has become an important productive force on media platforms. Therefore, future journalism students must not only possess "eighteen skills" to operate various software for document processing, spreadsheet creation, image processing, and animation production but also have the communication and coordination abilities to collaborate with engineering teams to complete media product production.

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*Note: Figure translations are in progress. See original paper for figures.*

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