

# ***Study on the Talent Cultivation Path of Journalism and Communication Liberal Arts Laboratories Driven by Artificial Intelligence***

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**Abstract:** The in-depth penetration of artificial intelligence technology is reshaping the production logic and talent demands of the journalism and communication industry. As a core carrier for practical talent cultivation, journalism and communication laboratories are facing an urgent need for intelligent transformation in their talent cultivation models. In line with the requirements of "New Liberal Arts" construction, this study analyzes the internal logic and practical challenges of talent cultivation in AI-driven journalism and communication laboratories. From six dimensions—reconstruction of cultivation objectives, optimization of curriculum systems, innovation of teaching models, development of faculty teams, upgrading of platform resources, and reform of evaluation mechanisms—a systematic practical path is constructed. This research provides theoretical references and practical paradigms for journalism and communication laboratories to cultivate interdisciplinary talents adaptable to the intelligent era.

## **1. Introduction**

With the rapid advancement of the new round of technological revolution and industrial transformation represented by artificial intelligence, the educational ecosystem will be continuously reshaped, making it particularly urgent to implement adaptive educational reform and innovation strategies. To adapt to this development trend, the Ministry of Education launched the "Six Excellence and One Top-Tier" Program in 2019, among which the "Excellent Journalism and Communication Talent Education and Cultivation Program" serves as a key component, aiming to cultivate journalism and communication talents suitable for the new era. Against this backdrop, the 2020 Work Priorities of the Social Science Department of the Ministry of Education clearly identifies university liberal arts laboratories as important carriers for the construction of "New Liberal Arts". Currently, liberal arts laboratories are confronted with the major task of deepening the integration of education, technology, and talent development. They need to fully leverage cutting-edge technological means such as AI to promote educational reform, strengthen the comprehensive capacity building of journalism and communication research institutions, and actively advance interdisciplinary integration, thereby exploring and reshaping new paradigms for

journalism and communication education and talent cultivation <sup>[1]</sup>.

As a crucial link connecting theoretical teaching and industry practice, journalism and communication laboratories have evolved from traditional simulated training platforms to comprehensive talent cultivation carriers featuring technology integration, interdisciplinary collaboration, and innovation incubation <sup>[2]</sup>. In this context, how to rely on laboratory platforms to effectively integrate AI technology into the entire process of talent cultivation and build a practical talent development system adaptable to the intelligent era has become a pressing issue in the field of journalism and communication education.

## 2. Internal Logic

The internal logic of talent cultivation in AI-driven journalism and communication laboratories can be elaborated from three dimensions: technological logic, demand logic, and educational logic. These three dimensions are interrelated and synergistic, collectively forming the underlying support for talent cultivation.

First, the technological logic is reflected in the reconstruction of the entire journalism production process by AI. In the clue mining phase, public opinion monitoring systems based on natural language processing can capture real-time information across the entire network and automatically identify potential news hotspots. In the content generation phase, AI writing tools can quickly produce structured reports such as sports events and financial news. In the communication and distribution phase, algorithm-based recommendation systems achieve precise content delivery by analyzing user profiles. In the effect evaluation phase, big data analysis tools can quantify communication effects and predict the evolution trend of public opinion. This technological reconstruction requires journalism and communication laboratories to break through the limitations of traditional simulated training, build a practical environment matching the intelligent production process, and enable students to intuitively perceive the reshaping effect of technology on the journalism industry during training.

Meanwhile, the demand logic stems from the urgent need of the industry for interdisciplinary talents. Currently, most media positions require candidates to possess data processing capabilities, yet talents cultivated through traditional journalism education have obvious shortcomings in these skills. This change in demand compels journalism and communication laboratories to incorporate AI skills into the core objectives of talent cultivation, ensuring that the cultivated talents can quickly adapt to job requirements in the intelligent era <sup>[3]</sup>.

Furthermore, the educational logic responds to the core requirements of "New Liberal Arts" construction. The Declaration on New Liberal Arts Construction emphasizes innovation-driven development and promotes the in-depth integration of liberal arts education with modern information technology. This requires journalism and communication laboratories to balance technology empowerment and humanistic guidance in talent cultivation. They should not only enhance the advancement and effectiveness of practical teaching through AI technology, enabling students to master necessary technical tools and methods, but also uphold the humanistic core of journalism and communication, cultivate students' critical thinking abilities regarding issues such as algorithmic bias and data privacy, and avoid the misunderstanding of technical application falling into instrumental rationality.

Driven by AI, talent cultivation in journalism and communication laboratories is a systematic project integrating the three logics of technology, demand, and education. The technological reconstruction of the entire journalism process provides practical scenarios, and the industry's demand for interdisciplinary talents clarifies the cultivation objectives <sup>[4]</sup>. Ultimately, the goal of cultivating interdisciplinary talents who understand technology, master professional knowledge, and

possess humanistic awareness is achieved.

### **3. Challenges in Talent Cultivation of AI-Driven Journalism and Communication Laboratories**

Although AI provides a driving force for the innovation of talent cultivation in journalism and communication laboratories, in the process of practical advancement, due to the path dependence of traditional educational models and the complexity of technical application, talent cultivation still faces multiple challenges. These challenges stand in sharp contrast to the requirements of the aforementioned internal logic and restrict the improvement of talent cultivation quality.

(1) Insufficient synergy between the curriculum system and technological development. The existing curriculum has the problem of "emphasizing three aspects while neglecting the other three": emphasizing traditional theories over technical application, with insufficient proportion of AI-related courses; emphasizing single-discipline teaching over interdisciplinary integration, as courses such as data journalism are mostly taught independently by journalism teachers, lacking collaboration with statistics and computer disciplines; emphasizing knowledge imparting over practical innovation, as curriculum content mostly stays at the explanation of technical principles, lacking project-based training in real scenarios, which makes it difficult for students to transform the technical knowledge they have learned into practical application capabilities<sup>[5]</sup>.

(2) Inadequate technical literacy of the faculty. Teachers in journalism and communication majors generally face the dilemma of "two deficiencies": deficiency in technical reserves, as most teachers have not received systematic AI knowledge training and can only perform basic tool operations; deficiency in interdisciplinary collaboration capabilities, as most teachers are still confined to single-discipline teaching and find it difficult to conduct in-depth cooperation with technical teachers. Although some universities have introduced teachers with technical backgrounds, due to their lack of practical experience in the journalism and communication industry, their teaching content is disconnected from practical needs, forming a gap where "technical teachers do not understand communication and communication teachers do not understand technology", which affects the teaching effect of integrating technology and professionalism<sup>[6]</sup>.

(3) Lagging construction of platform resources. The application of AI requires the support of infrastructure such as high-performance computers, big data servers, and intelligent interactive equipment, but most journalism and communication laboratories have insufficient investment in these aspects. Relevant surveys show that many local universities' journalism laboratories have limited data storage capacity and cannot support large-scale data processing training.

Talent cultivation in AI-driven journalism and communication laboratories faces many challenges. These challenges restrict the improvement of talent cultivation quality, and it is urgent to break the existing predicament from multiple aspects such as curriculum innovation, teaching model transformation, faculty training, and resource construction, so as to cultivate journalism and communication talents adaptable to the intelligent era and inject vitality into the development of the industry.

### **4. Practical Paths for Talent Cultivation of AI-Driven Journalism and Communication Liberal Arts Laboratories**

#### **4.1 Optimizing the Curriculum System**

The optimization of the curriculum system needs to break the barriers of traditional disciplines and construct a three-stage curriculum group, enabling students to gradually build a knowledge structure and competence system adaptable to the intelligent era.

The basic level (freshman and sophomore years) focuses on theoretical foundation and skill introduction, offering courses such as Introduction to Artificial Intelligence and Fundamentals of Data Analysis. Among them, Introduction to Artificial Intelligence needs to explain technical principles in combination with journalism and communication scenarios to avoid pure theoretical teaching, allowing students to understand the application scenarios and basic principles of AI technology in the journalism field. Fundamentals of Data Analysis introduces practical training on tools such as Excel and SPSS, enabling students to master basic data processing methods.

The advanced level (sophomore and junior years) focuses on technical application and interdisciplinary integration, setting up practical courses such as Data Journalism Practice, Algorithmic News Production, and Virtual Simulation Reporting. Data Journalism Practice requires students to use Python for data crawling, create visual reports with Tableau, and complete the entire process from topic selection to presentation, thereby improving their ability to apply technical tools. The innovation level (junior and senior years) centers on project-based courses, such as Intelligent Converged Media Innovation Workshop and Graduation Design on Intelligent Communication. These courses introduce real projects through cooperation with media institutions and ultimately produce implementable works or solutions. Such project-based courses closely integrate theoretical knowledge with practical problem-solving, cultivating students' comprehensive application capabilities and innovative spirit. Practice in some universities has shown that such courses can effectively improve students' industry adaptability and employability.

#### 4.2 Strengthening Faculty Team Construction

The construction of the faculty team needs to break the limitations of single disciplines, build an interdisciplinary and "double-qualified" teaching team, and improve teachers' technical literacy and practical capabilities, thereby providing faculty support for talent cultivation in the intelligent era. The implementation of the AI literacy improvement project involves regularly organizing teachers to participate in special training programs such as Python and Journalistic Data Processing and Application of Machine Learning, so as to systematically enhance teachers' technical knowledge reserves<sup>[7]</sup>. The introduction and cultivation of interdisciplinary talents need to take into account both technical background and journalistic practical experience, and optimize the structure of the faculty team. Flexibly introducing industry experts, such as hiring media technology directors and AI enterprise algorithm engineers as part-time teachers, can bring cutting-edge technical application experience and practical needs from the industry frontline. The collaborative education pattern formed by this cooperation model effectively makes up for the capability shortcomings of single-discipline teachers and improves the comprehensiveness and practicality of teaching.

#### 4.3 Upgrading Platform Resources

The upgrading of platform resources is the material foundation for AI empowerment, and it is necessary to proceed from three aspects: hardware construction, data ecology, and university-enterprise collaboration, so as to provide a complete technical support and practical environment for talent cultivation. The construction of intelligent hardware needs to meet diverse practical needs, configuring infrastructure such as high-performance computers and big data servers. Laboratories should establish AI workstations equipped with graphics processing units to support large-scale data processing and deep learning training, meeting the practical needs of data journalism and algorithm analysis. Introducing virtual studio systems, motion capture equipment, and VR headsets to build an immersive reporting practice scenario enables students to carry out practical training in new formats such as virtual news and interactive reporting. The university-enterprise collaboration mechanism is a key supplement to resource upgrading, which

can effectively improve the cutting-edge nature and authenticity of practical teaching <sup>[8]</sup>. The establishment of a dual-base model allows students to complete basic training in the university laboratory and then enter the enterprise practice base to participate in actual projects, enabling them to apply the knowledge and skills they have learned in a real industry environment and adapt to job requirements in advance.

## 5. Conclusion

Driven by AI, talent cultivation in journalism and communication laboratories should focus on technology empowerment and humanistic guidance. Its internal logic is reflected in the synergy of technological reconstruction, demand upgrading, and educational requirements. Currently, the cultivation process faces challenges such as curriculum disconnection, rigid models, insufficient faculty, and limited resources. These challenges restrict each other and affect the improvement of talent cultivation quality. Through the synergy of multiple paths, a closed-loop system is formed, aiming to provide a feasible plan for the intelligent transformation of journalism and communication laboratories, ensure that talent cultivation keeps up with the pace of technological development, and continuously deliver interdisciplinary talents adaptable to the era's needs for the journalism and communication industry.

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## References

- [1] Cui, Y., Han, X.M. and Zhao, H.J. (2025) *Exploration on the Digital Transformation of Liberal Arts Laboratories in Colleges and Universities under the Background of New Liberal Arts*. *Youth of the Times*, (02), 56-58.
- [2] Tan, Z.Y., He, L. and Chen, M.L. (2024) *Development Logic, Challenges and Practical Paths of Artificial Intelligence Empowering the Construction of Liberal Arts Laboratories in Colleges and Universities*. *Research and Exploration in Laboratory*, 43(08), 225-230.
- [3] Zhou, B. (2024) *Exploration and Reflection on the Construction of University Laboratories under the Background of New Liberal Arts*. *China Management Informatization*, 27(16), 221-223.
- [4] Wang, W.C. (2024) *Reform and Exploration of Experimental Teaching under the Background of New Liberal Arts*. *Digital Communication World*, (04), 191-193.
- [5] Min, Y.J. and Li, W.B. (2024) *Thoughts on the Construction of Liberal Arts Laboratories in Colleges and Universities in the Digital and Intelligent Era*. *Science & Technology Guide*, (01), 8-10.
- [6] Tang, X. and Zhu, Y.X. (2023) *Analysis on the Practical Path of Talent Cultivation in Local Colleges and Universities under the Background of New Liberal Arts*. *Employment and Security*, (12), 169-171.
- [7] Wang, J.H. and Li, J.C. (2023) *Construction and Practice of Liberal Arts Laboratories in Colleges and Universities under the Background of New Liberal Arts*. *Research and Exploration in Laboratory*, 42(08), 270-275+297.
- [8] Hu, Y.R. and Yang, D.X. (2022) *Thoughts on the Top-Level Design of Disciplinary Integration in Journalism and Communication under the Context of "New Liberal Arts" — The Case of Sichuan University and Universal Issues*. *China Radio & TV Academic Journal*, (09), 25-29.