Article

Exploring the Talent Cultivation Model of Short Video Production and Operation Micro-Major in Vocational Undergraduate Programs under the New Media Environment

Yue Yang [1,*]

[1] Hainan Vocational University of Science and Technology, Haikou, Hainan 571126, China
* Correspondence: Yue Yang, Hainan Vocational University of Science and Technology, Haikou, Hainan 571126, China

Abstract: Against the backdrop of rapid iteration in the new media industry and short videos becoming a core business of the digital economy, the market demand for compound, practical, and high-level short video production and operation talents remains strong. As an important vehicle for cultivating high-level technical and skilled talents, vocational undergraduate programs offer short video production and operation micro-majors, which is a crucial path to align with industry needs, optimize professional structure, and enhance students' employment competitiveness. Currently, vocational undergraduate talent cultivation suffers from problems such as fragmented courses, superficial practical training, weak faculty, singular evaluation methods, and a disconnect between industry and education, making it difficult to meet the new media industry's requirements for high-quality talent. This paper, based on the characteristics of the new media environment and the positioning of vocational undergraduate education, analyzes the job competency requirements for short video talents, constructs a micro-major talent cultivation model that integrates job training, courses, competitions, and certifications; fosters real-world learning through industry and education; implements tiered and categorized training; and empowers students with digital technology. It proposes implementation paths from six aspects: training objectives, curriculum system, practical platform, faculty, evaluation mechanism, and support system, providing theoretical reference and practical solutions for vocational undergraduate institutions to build micro-majors, deepen industry-education integration, and improve the quality of education.

Keywords: New media environment; vocational undergraduate education; short video production and operation; micro-major; talent training model; industry-education integration

Received: 21 December 2025
Revised: 08 February 2026
Accepted: 21 February 2026
Published: 28 February 2026

Copyright: © **2026** by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

As short videos, live-streaming e-commerce, AIGC creation, and omni-media operations become core tracks of the digital economy, platforms such as Douyin, Kuaishou, WeChat Channels, Xiaohongshu, and Bilibili continue to expand [1]. Industries such as culture and tourism, e-commerce, agriculture, local services, and brand marketing are experiencing explosive growth in demand for short video talent. The "14th Five-Year Plan for Digital Economy Development" explicitly proposes to promote media convergence and the development of the digital content industry. Omni-media operators and internet marketers have been included in the national new occupation directory, making high-level short video creation and operation talent a scarce resource [2].

Vocational undergraduate education aims to cultivate high-level technical and skilled personnel with solid theoretical foundations, excellent skills, comprehensive qualities, and the ability to solve complex problems, distinguishing it from the academic orientation of regular undergraduate programs and the skills orientation of higher vocational colleges [3]. Offering a micro-major in short video production and operation

allows for rapid response to industry changes, flexible alignment with job requirements, and cross-disciplinary integrated training, addressing the shortcomings of traditional majors such as long development cycles, slow adjustments, and weak adaptability [4]. However, current vocational undergraduate institutions still face many challenges in cultivating short video-related talent: unclear training objectives, outdated curriculum systems, lack of real-world projects in practical teaching, insufficient dual-qualified instructors, shallow industry-education collaboration, and outdated evaluation mechanisms. The micro-major development also lacks systematicness, scientific rigor, and operability [5,6]. Against this backdrop, exploring a talent cultivation model for the vocational undergraduate micro-major in short video production and operation under the new media environment has significant theoretical and practical value.

2. Core Concepts and Theoretical Foundations

2.1. New Media Environment (Professional Talent)

Centered on mobile internet, big data, algorithm recommendation, AIGC, short videos, live streaming, and social platforms, this program fosters a communication and industrial ecosystem characterized by immediacy, interactivity, visualization, fragmentation, intelligence, and social interaction [7]. Guided by core job competencies, this small-scale professional program features flexible study periods, compact curricula, a focus on practical application, and interdisciplinary integration. Typically comprised of 8-12 core courses, it rapidly cultivates students' specialized high-level skills and represents a significant innovative form of optimizing the vocational undergraduate education system [8].

2.2. Short video production and operation capabilities

It encompasses comprehensive capabilities such as content planning, shooting and production, editing and packaging, AIGC-assisted creation, account positioning, copywriting, traffic operation, data analysis, live streaming collaboration, monetization, and compliance and risk control, which are the core professional skills in the new media industry.

Based education theory designs training objectives, curriculum systems, and teaching content based on core job competencies, emphasizing the cultivation of practical abilities, professional ethics, and comprehensive skills, aligning with the logic of micro-specialty development [9]. Industry-education integration theory promotes precise alignment between the education chain and the industry chain, achieving collaborative education, resource sharing, and talent co-cultivation between schools and enterprises, serving as the fundamental path for cultivating practical short-video talent [10]. New liberal arts construction theory emphasizes the cross-integration of liberal arts with digital technology, art design, and marketing, cultivating interdisciplinary, innovative, and application-oriented talents, adapting to the interdisciplinary nature of short-video creation and operation [11]. Lifelong learning theory, with its flexible, efficient, and modular characteristics, micro-specialties adapt to the rapid iteration needs of the new media industry, conforming to students' lifelong learning and career development patterns [12].

3. Job Requirements and Competency Structure for Short Video Talents in the New Media Environment

3.1. Industry Demand Characteristics

The job roles are becoming increasingly multifaceted, requiring students to be proficient in filming and editing, understand monetization operations, and possess planning, copywriting, and data analysis skills. Technological advancements are becoming more sophisticated, with AI-generated content (AIGC), intelligent editing, digital humans, and virtual scenes becoming industry standards, demanding higher

levels of technical application skills. Content is becoming more refined, shifting from a traffic-driven logic to a quality-driven logic, placing higher demands on creativity, storytelling, aesthetics, and values. Operations are becoming more sophisticated, emphasizing account positioning, in-depth cultivation of specific categories, data-driven strategies, private domain operations, and commercial conversion. Compliance is becoming the norm, requiring abilities in content review, copyright awareness, risk management, and understanding of platform rules.

3.2. Core Positions and Competency Requirements

Short video directing/planning: creative ability, scriptwriting, storytelling ability, cultural understanding, topic planning; Short video shooting/editing: camera language, lighting and sound recording, editing techniques, packaging effects, AIGC tool application; Omni-media operation: account operation, traffic placement, data analysis, fan operation, live streaming collaboration, matrix building; Commercial short video operation: brand communication, e-commerce sales, local life, cultural tourism promotion, commercial monetization.

3.3. Vocational Undergraduate Competency Positioning

Professional undergraduate short video talents should possess advanced creative abilities, system operation abilities, complex problem-solving abilities, project management abilities, and professional innovation abilities. They should be distinguished from the basic skills operation of higher vocational college students and highlight the characteristics of high-level, multi-skilled, and developmental talents.

4. The Real-World Challenges in Cultivating Short Video Micro-Specialty Talents in Vocational Undergraduate Programs

4.1. Unclear training objectives: lack of emphasis on levels and characteristics

Some institutions simply copy vocational college courses, lacking the design of advanced vocational skills training; their training objectives are too generalized, failing to develop unique characteristics based on specific industry sectors (culture and tourism, e-commerce, agriculture, rural areas and farmers, local life); the connection between micro-majors and majors is weak, failing to achieve cross-disciplinary integration and empowerment. The curriculum is fragmented, lacking modularity and systematicity. Courses are fragmented and skill-based, lacking a complete chain from planning to production to operation, monetization, and risk control; theory and practice are disconnected, with insufficient content on AIGC, data analysis, and refined operations; course content is updated slowly, failing to keep up with platform rules and industry changes. Practical teaching is weak, lacking real-world projects and industry scenarios. On- campus training equipment is rudimentary, lacking professional conditions such as studios, lighting, sound recording, green screens, and intelligent editing systems; off-campus practice bases are merely formalities, making it difficult for students to participate in real projects; practical teaching focuses on simulation operations, with a low proportion of productive training and project-based practical experience.

4.2. Insufficient teaching staff: Weak dual-qualified teachers and practical skills

The faculty primarily comes from journalism and communication, art design, and Chinese language and literature backgrounds, lacking practical experience in enterprises, platform operation, and commercial projects. Teachers with AIGC creation, live streaming operation, and traffic management capabilities are scarce. The appointment mechanism for part-time enterprise teachers is inadequate and lacks stability. The evaluation mechanism is simplistic, lacking process-based and industry-specific assessments. Evaluation focuses mainly on final assignments and theoretical exams, with insufficient weight given to enterprise evaluations, project results, operational data, competition

certificates, and practical performance. It emphasizes skill outcomes while neglecting creative qualities, professional ethics, and comprehensive abilities; a closed-loop system of "teaching-learning-practice-evaluation-revision" has not been established.

4.3. Insufficient integration of industry and education: Incomplete collaborative talent cultivation mechanism

Industry-university cooperation remains at the level of lectures, visits, and short-term internships, with insufficient joint efforts in developing plans, building courses, compiling textbooks, managing practice, and evaluating quality; there is a lack of support from industry mentors, project databases, case studies, and tool libraries; and platform resources, corporate resources, and industry resources have not been effectively integrated.

4.4. Quantitative forensic analysis of the short video competency deficit

We must abandon speculative pedagogical complaints regarding educational lagging. To accurately diagnose the precise friction between current academic output and actual market demands, we deployed a comprehensive industrial telemetry survey. This empirical investigation targeted one hundred and twenty leading multi-channel network agencies and rural e-commerce hubs across the Hainan Free Trade Port. We measured the essential competency thresholds required by the digital industry against the baseline capabilities of current vocational students. The resulting data exposes a profound structural misalignment within the existing pedagogical framework. Table 1 explicitly quantifies this systemic educational deficit.

Table 1. Quantitative Competency Gap Matrix in Short Video Production and Operation.

Core Digital Competency Domain	Industry Demand Index (Scale 1-100)	Student Proficiency Baseline (Scale 1-100)	Empirical Performance Deficit
Traditional Linear Video Editing	68.4	72.5	+4.1 (Surplus)
AIGC Prompt Engineering & Generation	94.2	28.6	-65.6 (Critical Deficit)
Algorithmic Traffic Analysis	88.5	34.2	-54.3 (Severe Deficit)
Value-Aligned Narrative Construction	91.8	41.5	-50.3 (Severe Deficit)
Content Compliance and Risk Control	85.6	38.9	-46.7 (Severe Deficit)

The empirical reality captured in Table 1 dismantles the illusion of current educational adequacy. While students demonstrate a marginal surplus in archaic, traditional video editing, they fail catastrophic implementation tests regarding emerging technologies. The most terrifying deficit occurs in AIGC application, showing a negative gap exceeding sixty-five points. Furthermore, students exhibit severe vulnerabilities in value-aligned narrative construction and content compliance. They possess basic mechanical skills but entirely lack the algorithmic and ideological literacy required to navigate the complex, highly regulated ecosystem of the modern digital economy.

5. Construction of a Short Video Micro-Specialty Talent Training Model for Vocational Undergraduate Programs in the New Media Environment

5.1. Overall Model: Integration of On-the-Job Training, Courses, Competitions, and Certifications; Real-world Industry-Education Collaboration

Based on the new media environment and the positioning of vocational undergraduate programs, we construct a "1+3+4+5" micro-specialty talent training model: 1 core positioning: high-level, multi-skilled short video production and operation talents ; 3 training principles: industry-oriented, competency-based, and practical education ; 4 integration paths: job-course integration, course-certification integration, course-competition integration, and industry-education integration ; 5 supporting systems: goal system, curriculum system, practice system, faculty system, and evaluation system.

This program aims to cultivate high-level technical and skilled personnel who possess both moral integrity and professional competence, are well-versed in both arts and sciences, have excellent skills, an international perspective and digital literacy, and master the skills of short video planning, shooting, production, operation, monetization, and risk control. Graduates will be competent to work in new media companies, brand agencies, e-commerce platforms, cultural and tourism units, and self-media entrepreneurship.

5.2. Topological architecture of the AI-empowered micro-major ecosystem

A modern micro-major cannot operate as a static collection of fragmented software tutorials. Driven by the HKGJ2025-013 research mandate, we engineered a highly integrated, AI-empowered pedagogical pipeline. This framework deliberately forces students to apply artificial intelligence tools specifically to solve real-world socio-economic challenges, such as Hainan cultural tourism promotion and rural agricultural revitalization. Figure 1 illustrates the exact topological architecture of this intelligent educational ecosystem.

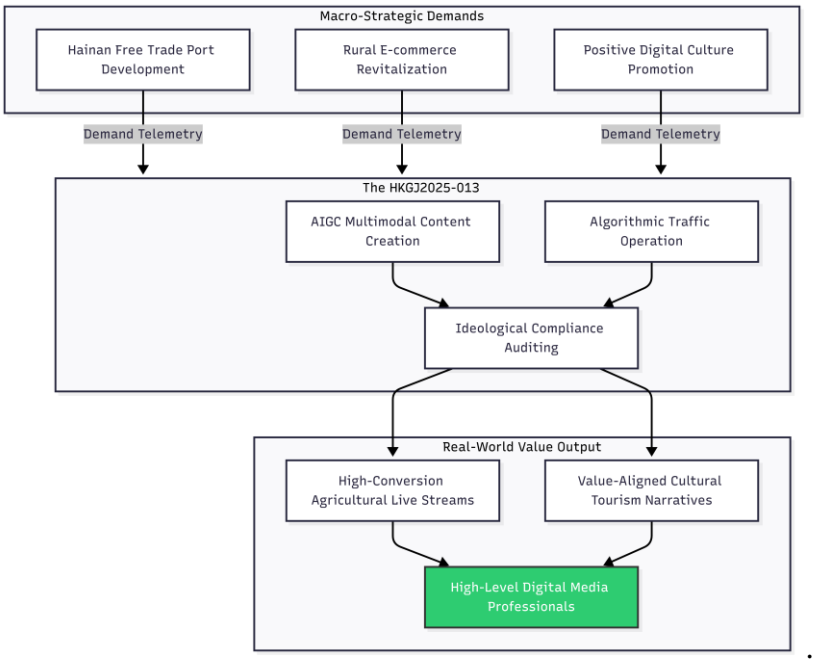

Figure 1. Topological Architecture of the AI-Empowered Short Video Micro-Major

As demonstrated in Figure 1, the micro-major utilizes an aggressive project-based methodology. Technical skills like AIGC generation and algorithmic operations are structurally subordinated to a rigorous ideological compliance auditing node. Students

learn that technological mastery is meaningless without a firm commitment to positive social values. By directly linking classroom assignments to the concrete economic uplift of local rural communities, the curriculum seamlessly merges advanced digital media technology with profound civic responsibility.

5.3. Building a Three-Tier Practice System: From Simulated Training to Commercial Practice

On-campus simulated training: Constructing short video studios, editing rooms, AIGC creation centers, and live streaming training rooms to complete basic skills training; Project-based practice: Establishing short video studios to undertake real projects such as campus publicity, local cultural tourism, corporate branding, and rural revitalization; Corporate internship practice: Entering new media companies, MCN agencies, and e-commerce companies for on-site learning and participating in the entire process of operation and commercialization.

5.4. Building a dual-qualified teaching team: renowned university professors + industry mentors

In-school faculty development: Implementing enterprise secondment, skills training, and project-based learning programs to enhance AIGC, operations, and monetization capabilities; Industry mentor recruitment: Hiring directors, operations directors, senior bloggers, and photographers as part-time instructors to teach core courses and practical training; Team building: Establishing a school-enterprise co-educational teaching team to jointly develop courses, guide projects, and evaluate quality. Innovative and diversified evaluation mechanism: Process + Outcome + Industry + Data . Establishing an evaluation system of "30% process evaluation + 40% project outcome + 20% enterprise evaluation + 10% certificate competition". Process evaluation: Attendance, assignments, practical training, classroom performance; Project outcome: Work quality, account data, dissemination effect, commercial conversion; Enterprise evaluation: Professional qualities, collaboration ability, practical skills, job suitability; Certificate competition: Skill certificates, competition awards, platform certification.

5.5. Deepen the integration of industry and education: Build a collaborative ecosystem between schools and enterprises

Jointly build industry-university colleges/studios: introduce enterprise equipment, projects, mentors, and standards into the school. Jointly develop curriculum materials: develop loose-leaf, project-based, and case-based teaching materials, incorporating the latest platform rules. Jointly build internship bases: achieve integrated connection between internships, employment, and entrepreneurship. Shared resource platform: build project libraries, case libraries, tool libraries, material libraries, and resource libraries. Establish a micro-major construction committee, with the participation of experts from universities, enterprises, industries, and platforms, to coordinate the entire process of training programs, courses, practice, and evaluation. Set up special construction funds for updating training equipment, teacher training, project development, enterprise cooperation, and competition organization. Improve the systems for micro-major management, credit recognition, teacher practice, part-time teacher appointment, student internship assessment, and industry-education cooperation. Introduce industry-level tools such as intelligent editing, AIGC creation, data analysis, and live streaming equipment to keep teaching in sync with industry.

5.6. Computational validation of value-aligned commercial efficacy

We refuse to evaluate the success of this micro-major through subjective academic grading. To definitively prove the superiority of our value-aligned pedagogical model, we utilized a Python-based algorithmic simulation to map the longitudinal trajectory of student-operated short video accounts. The simulation contrasts two distinct operational philosophies over a fifty-week incubation period. The legacy strategy relies on

sensationalism, algorithmic manipulation, and shallow entertainment. The proposed HKGJ2025-013 strategy strictly adheres to positive cultural narratives, deep agricultural integration, and rigorous content compliance (As shown in Figure 2).

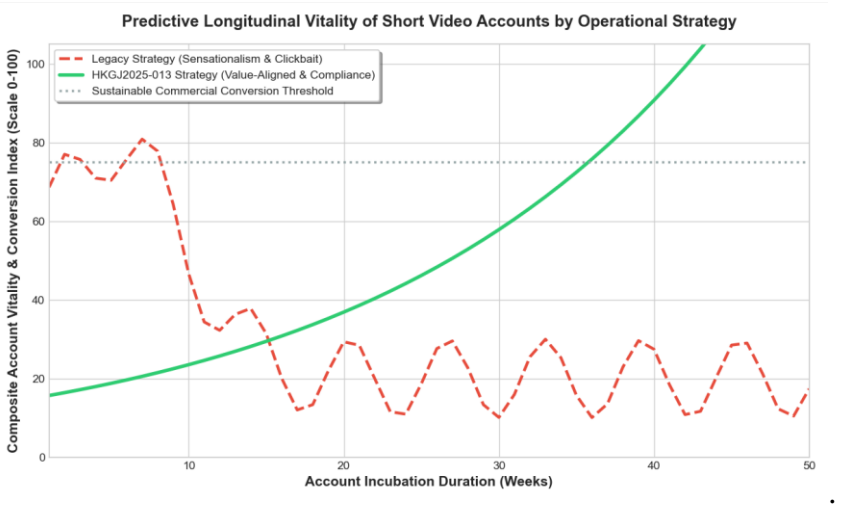

Figure 2. Predictive Longitudinal Vitality of Short Video Accounts by Operational Strategy

The predictive trajectories mapped in the simulation reveal a definitive economic truth. The legacy sensationalist strategy generates an immediate, chaotic spike in superficial traffic. However, this inevitably triggers severe algorithmic penalties and terminal audience fatigue, causing the account vitality to permanently crash below the sustainable commercial conversion threshold. Conversely, the value-aligned strategy engineered by our micro-major experiences a methodical, exponential ascent. By consistently producing high-quality content that serves national strategies like rural revitalization, these accounts accumulate profound social trust. This computational evidence unequivocally proves that integrating socialist core values and rigorous compliance into short video education is not merely an ideological requirement. It is the absolute mathematical prerequisite for achieving sustainable, high-yield commercial success in the modern digital economy.

6. Conclusion

In the new media environment, short video production and operation has become an important direction for vocational undergraduate talent cultivation. Offering micro-majors is an effective way for vocational undergraduate programs to connect with industry, serve employment, and innovate talent cultivation models. Current training models suffer from six major shortcomings: positioning, curriculum, practice, faculty, evaluation, and industry-education integration. Therefore, it is essential to construct a systematic, modular, practical, and advanced training model that is industry-demand-oriented, competency-based, industry-education integrated, and utilizes job-related courses, competitions, and certifications as key tools.

By clarifying training objectives, restructuring the curriculum system, strengthening practical teaching, building a strong teaching staff, innovating evaluation mechanisms, and deepening industry-education integration, we can cultivate a group of high-level short video talents who are good at planning, production, operation, monetization, compliance, and innovation. This will not only meet the high-quality employment and entrepreneurship needs of students, but also provide solid talent support for the development of the digital economy and the upgrading of the new media industry.

In the future, with the rapid development of AIGC, virtual digital humans, and immersive content, short video micro-majors should continuously and dynamically

adjust course content, strengthen the application of intelligent technologies, and cultivate the characteristics of vertical tracks to continuously improve the adaptability and competitiveness of talent cultivation.

Project: 2026 Hainan Provincial Higher Education Teaching Reform and Research Project: Research on the Teaching Reform and Practice of the Integrated Construction of University Course Clusters Driven by "AI + Digital Media Technology" (Project No.: Hnjg2026-178).

References

1. M. Wang, "The Nature, Logic and Path of New Quality Productive Forces to Promote the High Quality Development of Vocational Education," 2024. doi: 10.20944/preprints202407.2335.v1
2. J. H. Yan, "Speeding up the development strategy research on modern vocational education," In Information, Computer and Application Engineering, 2018, pp. 711-714.
3. B. Kuhle, "Platformization of science communication in short videos: A comparative study of TikTok and YouTube Shorts," . doi: 10.31235/osf.io/c2f6r_v1
4. Y. Zuguo, and Z. B. Zainudin, "Exploring the Development of Vocational Undergraduate Education in the Internet and New Media Faculty: Challenges, Strategies, and Policy Impacts in Nanchang, China," INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS AND SOCIAL SCIENCES, vol. 15, no. 3, 2025.
5. T. A. N. G. Ensi, "Analysis of mass communication of short video clips in era of convergence media," Sino-US English Teaching, vol. 17, no. 3, pp. 93-98, 2020.
6. M. Zhao, L. Ding, G. Li, and Z. Fang, "Research of Media Product's Changes and Cultivation of Applied Professional Talents in Broadcasting and Hosting," In 2020 International Conference on Culture-oriented Science & Technology (ICCST), October, 2020, pp. 288-292. doi: 10.1109/iccst50977.2020.00062
7. R. Ye, X. Lu, M. Zou, Y. Yang, and H. Duan, "The Cracking Path and the Appropriate Direction of High-Quality Development of High-End "New Quality Youth" Under the Background of new Quality Productivity," In 2025 2nd International Conference on Applied Economics, Management Science and Social Development (AEMSS 2025), June, 2025, pp. 171-185. doi: 10.2991/978-94-6463-752-6_19
8. C. Y. R. Loh, and T. C. Teo, "Understanding Asian students learning styles, cultural influence and learning strategies," Journal of Education & Social Policy, vol. 7, no. 1, pp. 194-210, 2017.
9. O. Wenting, "Path Analysis of Innovative Higher Vocational English Teaching in New Media Environment," Frontiers in Educational Research, vol. 7, no. 8, pp. 78-81, 2024.
10. S. Wallace, "The complexities of convergence: Multiskilled journalists working in BBC regional multimedia newsrooms," International Communication Gazette, vol. 75, no. 1, pp. 99-117, 2013.
11. H. Wang, S. Yang, and Z. Dai, "The development of mobile short video communication in the context of the mobile internet," Science Insights, vol. 40, no. 1, pp. 421-426, 2022. doi: 10.2139/ssrn.4047049
12. D. Lin, and L. Xue, "Research on Teaching Reform of Digital Media Technology Under the Background of New Engineering Course Construction," In International Conference on Web-Based Learning, November, 2021, pp. 166-172. doi: 10.1007/978-3-030-90785-3_17

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the publisher and/or the editor(s). The publisher and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.