Article

Analysis on the Effect of Cultivating Media Majors in Hainan Free Trade Port under the Background of Generative AI

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Abstract: Driven by the digital and information revolution, artificial intelligence (AI) technology is increasingly permeating all sectors, presenting both unprecedented opportunities and challenges for societal transformation. In this context, the media industry-a vital domain for information dissemination and public opinion guidance-faces transformative opportunities. The educational mission of vocational media programs in the AI era has become more crucial than ever. These programs must not only provide students with solid foundational knowledge and practical skills in media but also actively guide them to contemplate AI's impact on the field. By fostering innovative thinking, social responsibility, and legal ethics awareness, they aim to cultivate well-rounded media professionals with comprehensive competencies. This study examines the influence of generative AI on educational outcomes through research and analysis of vocational media programs in Hainan Free Trade Port. Through in-depth investigations into curriculum design, teaching methodologies, and practical training approaches, it seeks to identify effective strategies for enhancing educational effectiveness, ultimately cultivating media talents that meet the demands of the new era for Hainan Free Trade Port.

Keywords: generative AI; Hainan free trade port; higher vocational media majors; education effectiveness

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1. Introduction

In the era of rapid AI advancement, the media industry is undergoing profound transformations and challenges. With technological breakthroughs, generative AI has been widely adopted in media sectors, including automated news writing, intelligent video editing, and virtual anchors. This innovation not only revolutionizes production methods and communication models but also raises new demands for cultivating media professionals. The development of Hainan Free Trade Port presents fresh opportunities for media growth. As a crucial pathway for training applied media talents, vocational education programs must keep pace with the times, proactively address generative AI's challenges, enhance educational effectiveness, and provide robust talent support for the media industry's development in Hainan Free Trade Port.

Generative AI also reshapes professional roles and ethical standards in the media field. Future practitioners must master AI-assisted tools while safeguarding authenticity and credibility. For Hainan Free Trade Port, this means vocational education should integrate technical training with critical judgment and innovation, ensuring that AI-driven media development supports both industrial progress and cultural values.

2. The Influence of Generative AI on Education in Media Majors in Hainan Free Trade Port

2.1. Opportunities

Generative AI is deeply embedded in media education practices, reshaping the implementation pathways of vocational teaching. In practical training classrooms at some Hainan vocational colleges, students utilize natural language processing models to complete news lead generation and public opinion report writing. The writing process has shifted from single-text output to human-machine collaborative creation, significantly enhancing content production efficiency [1]. A media program at a certain institution introduced an AI video generation platform, enabling students to produce multiple versions of short video materials by inputting structured scripts. Through iterative adjustments of prompts and parameters, students deepen their understanding of narrative logic and visual rhythm. Such technological integration not only shortens basic operational cycles but also frees up more instructional time for creative conceptualization and strategic design. Meanwhile, AI-driven personalized learning systems recommend matching case libraries based on students' creative trajectories, covering localized content such as policy interpretation videos for the Free Trade Port and regional cultural tourism IP planning schemes, enhancing the authenticity of learning scenarios and regional relevance [2]. In terms of employment orientation, recruitment data from a Sanya media company shows that 37% of new positions in 2023 explicitly require AI content generation tool application skills. Particularly, interdisciplinary talents combining communication theory literacy and technical operational capabilities are in high demand in content factories and digital marketing agencies. Industry demands are driving the transformation of talent cultivation models, prompting vocational education to evolve from skill training to a three-dimensional capability structure of "technical understanding-creative transformation-value judgment," advancing media education from tool adaptation to subject construction [3].

2.2. Challenges

The rapid evolution of generative AI is fundamentally reshaping the core principles of vocational media education. In classrooms across Hainan, instructors still rely on linear teaching models to deliver static knowledge, while students often struggle to identify logical flaws or value discrepancies in AI-generated news articles or short video scripts, exposing the curriculum's technological awareness lag. Current teaching content predominantly focuses on traditional editorial skills, lacking systematic instruction on algorithm mechanisms, prompt engineering, and generative boundaries. This leaves students trapped in a "can operate but don't understand principles" dilemma when using AI tools in real-world scenarios. The transformation of teaching methods is urgent, as monotonous knowledge infusion can no longer meet the complex demands of human-AI collaborative creation. Some pilot classes have introduced project-driven approaches, designing AI-assisted creation tasks around free trade port policy communication. Through team collaboration, students repeatedly fine-tune model outputs and compare manual versus machine-generated narratives, gradually developing judgment regarding content credibility and creative originality. However, practical observations reveal students blindly adopting AI-generated content, leading to homogenized works and diluted individual expression under algorithmic logic [4]. This technological dependency quietly erodes their ability for independent conceptualization and critical reflection, particularly in fields requiring deep value judgments like public opinion analysis and brand storytelling, exposing the disconnect between technical application and humanistic reasoning. How to reconstruct an educational paradigm where "human remains the subject while technology serves as a tool" has become a pivotal challenge for the transformation and upgrading of Hainan's vocational media education.

3. Analysis of the Education Status of Media Majors in Higher Vocational Colleges in Hainan Free Trade Port

3.1. Curriculum

The curriculum frameworks for media-related majors in some higher vocational colleges within Hainan Free Trade Port remain entrenched in traditional disciplinary paradigms. The current course structures predominantly focus on foundational modules such as news gathering and editing, and video production, with teaching content showing significant disconnect from industry frontiers. In classrooms, instructors often deliver linear lectures on communication theories through PowerPoint presentations, while students mechanically memorize key points without gaining awareness of evolving media ecosystems. Although some institutions have introduced courses like new media operations and digital content creation, technical knowledge about generative AI-including algorithmic logic and prompt engineering-remains scattered across elective modules rather than forming a cohesive core within talent development programs [5]. Weak horizontal integration between courses and the separation between theoretical and practical skills leave students struggling to synthesize cross-module knowledge when addressing complex tasks like identifying ethical risks in AI-generated texts or constructing human-machine collaborative narratives. This fragmented knowledge further exacerbates structural deficiencies in professional competencies.

3.2. Teaching Methodology

In classroom settings, instructors often rely on PPT presentations for linear theoretical instruction, while students mechanically memorize key points without developing awareness of media ecosystem transformations. Although some courses incorporate practical training in short video production or public opinion analysis, task designs remain confined to template application and procedural imitation, failing to integrate real-world workflows driven by generative AI, such as content curation, intelligent distribution, and data storytelling. While some teachers experiment with AI-assisted assignment grading or case text generation, their implementations are limited to command input and result adoption, neglecting instructional design elements like prompt engineering, algorithmic bias detection, and human-machine collaborative creation mechanisms, resulting in superficial technological applications [6]. Although some young faculty members possess basic digital literacy, they face cognitive blind spots and implementation barriers in curriculum restructuring due to a lack of systematic training and interdisciplinary support. The insufficient depth of human-computer interaction in teaching scenarios exposes structural contradictions where pedagogical transformation lags behind technological evolution. When students encounter copyright disputes, fact-checking, and value-oriented evaluations of AI-generated content, they frequently demonstrate cognitive confusion and weak judgment capabilities, reflecting deeper challenges of the disconnect between technical tools and critical thinking in educational processes.

3.3. Practical Teaching

As a crucial pathway for cultivating talent in media-related vocational education, practical training faces growing challenges amidst the Hainan Free Trade Port development. While some institutions maintain on-campus training platforms, outdated equipment and stagnant technological updates struggle to keep pace with the industry's rapid evolution in intelligent content creation and multi-platform distribution. Many workshops remain confined to basic exercises like editing software drills or template-based news writing, lacking integration of cutting-edge applications such as generative AI-assisted creation, cross-media narrative planning, and public opinion data analysis. Students repeatedly apply pre-set templates in virtual projects, missing out on authentic experiences involving full-cycle processes like topic ideation, resource coordination, and

real-time feedback. Off-campus resources are fragmented, with limited partner companies offering only peripheral internships that result in low student engagement. Practical training often remains confined to document organization and basic filming, failing to address core aspects like content curation, algorithm optimization, and dissemination effectiveness evaluation. Some assessments still rely solely on project completion rates, neglecting comprehensive evaluations of technical adaptability, ethical compliance, and innovative logic. This structural disconnect between training environments and industrial ecosystems leaves students ill-prepared to handle complex challenges in intelligent communication ecosystems, lacking both practical problem-solving skills and systematic thinking-ultimately hindering the sustainable growth of high-quality technical professionals.

4. Strategies to Improve the Educational Effect of Media Majors in Higher Vocational Colleges in Hainan Free Trade Port

4.1. Optimize the Curriculum System

In the context of advancing the digital content industry in Hainan Free Trade Port, media-related academic curricula urgently need to address structural transformations within intelligent communication ecosystems. The traditional disconnect between technology and content in course design has become increasingly evident, with students frequently demonstrating application gaps and ethical judgment deficiencies when using AIGC tools. To tackle this, we should systematically redesign curriculum modules by introducing core courses such as "Introduction to Generative AI", "Practical Training in Intelligent Content Generation & Editing", and "Algorithmic Communication & Media Governance". These courses will incorporate knowledge units on natural language processing, multimodal generation mechanisms, and prompt engineering to deepen technical understanding. For curriculum integration, we should promote blended teaching that combines news editing with AI writing engines, implement large model-assisted information extraction and narrative generation in public opinion reporting training, and design automated copywriting tasks based on user profiles in advertising creativity courses. This approach achieves bidirectional integration of professional skills and technical logic. By establishing a tripartite curriculum matrix of "technology-content-ethics", students will gain contextual understanding of AI-assisted creation boundaries and responsibilities, develop comprehensive awareness of intelligent communication chains, and ultimately cultivate new media professionals with technological sensitivity and value judgment capabilities.

4.2. Innovative Teaching Methods

The advancement of project-based teaching requires integration with real-world industrial scenarios, transforming typical tasks in regional media transformation into pedagogical vehicles. For instance, guiding student teams to undertake short video production projects for local converged media centers, utilizing generative AI for script development, automated editing, and multi-platform adaptation, allows students to understand the logical nodes embedded in technical workflows through dynamic collaboration. During this process, students must not only coordinate role assignments but also iteratively refine content strategies driven by data feedback, forming an embodied understanding of intelligent communication closed loops. Case-based teaching should focus on the tension fields of technological applications, such as analyzing how the "Hainan International Communication Center" employs AI translation and virtual anchors in international reporting, revealing its balance between enhancing communication efficiency and cultural misinterpretation risks. By guiding students to deconstruct these typical scenarios, we activate their critical awareness regarding both technological efficacy and ethical boundaries. Classroom discussions transcend functional descriptions by delving into structural issues like algorithmic bias, copyright ownership, and source credibility, prompting learners to shift from instrumental cognition to value judgment. This transforms the teaching process

into a dialogue space between technological logic and media professionalism, enabling students to build critical practical skills through responding to complex real-world challenges and reshape knowledge generation pathways in media education within intelligent contexts.

4.3. Strengthen Practical Teaching

Building on the deep integration of regional media, the development of practical teaching bases is gradually breaking through the superficial cooperation model between schools and enterprises. At a converged media center training site in Haikou Jiangdong New Area, student teams fully participate in "Smart Cultural Tourism" short video projects, covering the entire content production cycle from topic planning to AI-generated scripts, virtual anchor appearances, and algorithm-driven multi-platform distribution. By deeply integrating into real work processes, students master generative AI tools 'technical adaptation logic through dynamic feedback while confronting practical challenges like data bias, semantic distortion, and cross-cultural communication symbol misinterpretation. Some students experienced firsthand during their involvement in Sanya International Communication Center's overseas dissemination matrix construction how AI-generated content required cultural context adjustments, enhancing critical awareness in technology application. Practical content has also expanded into competition and innovation fields. In recent years, students completed three provincial awards in the National College Students Online Editing Innovation Competition by creating interactive narrative works on intangible cultural heritage with AI assistance, demonstrating creative transformation capabilities in technological integration. The training mechanism no longer confines to skill drills but achieves cognitive iteration through project-based learning, enabling students to develop dual awareness of technical rationality and media responsibility in complex communication scenarios. School-enterprise collaboration has evolved into a symbiotic knowledge co-creation entity, driving media talent cultivation from passive adaptation to proactive leadership.

4.4. Improve the Quality of Teachers

Teacher professional development must be deeply embedded in the transformative practices of technological innovation to drive structural transformation of teaching capabilities. At a vocational college in Hainan, faculty teams regularly conduct workshops using generative AI toolchains. Through fine-tuning localized language models and analyzing semantic biases in AI-generated content, they gradually build cognitive frameworks to understand the underlying technical logic. Some teachers participate in the entire content production process at regional media convergence centers, experiencing firsthand the tension between AI-assisted topic selection and human value judgments, while reflecting on balancing algorithmic recommendations with public opinion guidance in real-world contexts. School-based professional development has shifted beyond technical operations to paradigm restructuring in instructional design. For instance, prompt engineering is integrated into journalism courses to guide students in incorporating information ethics and narrative strategies through instructional design. Meanwhile, faculty research focuses on adapting AIGC for regional cultural dissemination. A research team has developed a generative model training program incorporating ethnographic data for digital communication of Li ethnic intangible cultural heritage projects, with outcomes applied to building teaching case libraries. This integrated "research-teaching-application" pathway enables teachers to maintain academic sensitivity and pedagogical awareness amidst technological iterations, cultivating localized knowledge transformation capabilities. Faculty development thus transcends skill-upgrading logic, shifting toward reshaping the subjectivity of media education in the intelligent era, providing sustained intellectual support for curriculum reform.

5. Conclusions

The rapid advancement of generative artificial intelligence (AI) is fundamentally reshaping media ecosystems, creating a context for structural transformation in media-related disciplines at Hainan Free Trade Port vocational colleges. Current professional development faces systemic challenges, including outdated curricula lagging behind technological evolution, overemphasis on theoretical instruction, and disconnects between practical training and industry demands, all of which hinder the cultivation of adaptable professionals. To address these issues, comprehensive reforms are required: Curriculum systems should incorporate cutting-edge modules like AI-generated content, intelligent communication ethics, and data-driven storytelling while strengthening interdisciplinary integration. Teaching methodologies must evolve from one-way lectures to task-driven simulations using virtual production environments for immersive learning. Practical training requires establishing closed-loop industry-education integration through regional converged media platforms, enabling students to master human-machine collaboration capabilities in real-world projects. Educators need to transition from knowledge transmitters to technology interpreters and value guides, applying research insights from AI content creation to enrich pedagogy and develop localized communication case studies. Only through coordinated evolution across curriculum design, teaching practices, practical implementation, and faculty development can we establish a new talent cultivation paradigm aligned with intelligent communication trends, thereby providing sustainable support for enhancing international communication capabilities in the Free Trade Port.

Looking ahead, the integration of generative AI into vocational education should not only aim at technical proficiency but also nurture ethical awareness, creative adaptability, and global vision. By aligning training outcomes with industry demands and regional development strategies, vocational colleges in Hainan Free Trade Port can position themselves as pioneers in producing versatile media professionals who bridge technological innovation with cultural responsibility.

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