A Study on the Training Path of Digital Media Talents in the AIGC Context

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Abstract: This paper discusses the current status of the development of the digital media industry from the perspective of content generation and distribution under the influence of AIGC. It analyzes the characteristics of digital media professionals under the AIGC context, which include all-media nature, high efficiency, and human-machine collaboration. The influence of AIGC puts forward new requirements for the cultivation of digital media talents. Therefore, this paper has conducted research on the training system of digital media talents and found issues such as the mismatch between policy mechanisms and rapid digital development, the need to improve the teaching staff, insufficient investment in key laboratories, and lack of practical ability of students. Attempts have been made to establish a university digital media talent training system by improving policy mechanisms, strengthening teacher training, increasing laboratory investment, and establishing industry-university-research unstructured training.

1. Introduction

AIGC, or Artificial Intelligence Generated Content, refers to the content created by artificial intelligence using computing power, algorithms, and big data[1]. The basic principle of AIGC is "humans training machines to understand the tasks given by humans (instructions), and then complete the tasks (provide answers)"[2]. The representative application of AIGC is the natural language processing model Chat GPT developed by the American AI laboratory Open AI based on the Transformer architecture in November 2022. As soon as Chat GPT was released and open for registration to a wide range of online users, it exploded on the internet, reaching 100 million monthly active users just two months after registration, becoming the fastest-growing internet application. The explosion of Chat GPT has attracted widespread attention, and AIGC is now being applied in various fields.

2. Digital Media Industry Under the Influence of AIGC

AIGC is widely used in the news industry, broadcasting industry, internet audio-visual industry, etc., and its application has penetrated into the field of content production. The iterative algorithms, increased computing power, and big data enable AI to generate and distribute content in the digital media field in a comprehensive, three-dimensional, and diversified manner. AIGC, as a new type of content generation method following PGC (Professional Generated Content) and UGC (User Generated Content), uses AI technology for content generation. "Massive data and intelligent organization driving content production are the basic characteristics distinguishing AIGC from other concepts". AIGC's influence on digital media is not only reflected in the intelligent upgrade of the content production process but also further improves the productivity and integrity of content production and distribution chains, enabling AI to turn towards more profound, wider content creation and more convenient and efficient content distribution. AIGC has both the professionalism of PGC and the diversity, freedom, and personalization of UGC[3].

(1) Content Generation Under the Influence of AIGC

AI can write news drafts, video scripts, and anchor scripts, which are applied in news shorts, online live broadcasts, etc. AI can generate scenarios from scripts and characters and scenes from texts. This type of image generation is currently used in pre-production effect display of film and television works. AI-generated voices can be used in popular music, audiobooks, music content

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creation, dubbing for games and movies, and adding interesting elements to the images, and AI voice can also enhance digital news anchors.

AI modeling can use AI to build 3D models of characters and scenes, making two-dimensional images into three-dimensional graphics. AI recognition can identify characters, props, scenes, and weather in video images, perform intelligent coding and elimination, repair and restore characters, beautify, and replace specific characters' faces. AI editing can use AI to batch edit videos, add voice translation and subtitles. AI driving can transform pictures into videos, build movie backgrounds with synthetic virtual scenes, perform real-time rendering, and intelligently synthesize light, characters, and scenes, shortening the production cycle.

(2) Content Distribution Under the Influence of AIGC

AI plays a significant role in the metaverse, building a second space for users. The digital people and virtual people generated by AI are widely used in the field of content distribution. Digital people are based on real human images in the digital world representing real people, and virtual people are digitized identities built based on data without real human images. The novelty of digital anchors generated by AI for news broadcasts compared to human anchors makes the content distribution more effective. AIGC and IP thinking create virtual idols, which are virtual people that can be set according to popular trends, produce content based on real events, and present with virtual idols, making content distribution more timely and interesting[4].

3. Characteristics of Digital Media Talents in the AIGC Context

The technological upgrade brought by AIGC has not only changed the interaction between technical elements and producers in the relations of production but also brought about a more efficient content productivity. At present, digital media practitioners applying AIGC are characterized by their all-media nature, efficiency, and human-machine collaboration[5].

(1) All-Media Nature

With AIGC represented by ChatGPT, the industrial chain gradually formed. The upstream mainly includes data suppliers, algorithm/model institutions, and content creators. The midstream mainly includes the processing parties for text, image, and sound digital content. The downstream mainly involves various digital content distribution platforms, consumers, and organizations. Digital media practitioners need to have the thinking and ability to process the entire industrial chain from content creation to processing and distribution.

(2) Efficiency

The speed and efficiency of AI in generating news drafts, video scripts, and anchor lines can preempt the news release, intervening in the event before the public opinion window is open, drawing users' continuous attention. The "short, flat, and fast" generation of AI text allows users to break time and space constraints to acquire information. AI-generated images and voices based on text descriptions meet user needs, and users recognize AIGC content. Digital media practitioners should have a high sensitivity to news and user preferences, maintaining efficient content production and distribution.

(3) Human-Machine Collaboration

"Depersonalization," "mechanization," and "expression limitations" are usually considered the main shortcomings of AI writing. The writing completed by AI, while gaining speed, also loses "humanity" and reporting "depth," presenting a "flattened" state. Digital media practitioners need to make value judgments on news events, choose values, and determine the reporting angle to make the report more humanized. After most events occur, the public needs a deep, systematic, and detailed analysis and investigation of the event, and they need to dig deeper and critically think about the news clues behind the event. This requires digital media personnel to polish, check, and layout news drafts, flexibly perform the role of a "gatekeeper," and collaborate with AI on the same frequency.

4. Current Talent Training Issues

With the breakthrough progress in AI capabilities, a content production paradigm, AIGC, has emerged, and it has transitioned from specialized artificial intelligence content generation to general artificial intelligence content generation[6]. The prosperity and development of the cultural and creative industries require "three innovations" talents with creative thinking ability, innovative implementation ability, and entrepreneurial management ability[7]. Digital media, as an important part of the cultural and creative industries, the improvement of technology, and the upgrade of the model, place higher requirements on digital media practitioners, test the capabilities of practitioners in the new era, and present new challenges to the training of digital media talents. Currently, there are four issues in the training of digital media talents: policy mechanisms are not matched with technology,

(1) Education Mechanism Does Not Match with Rapid Digital Development

Digital media far exceeds the concept of traditional media in all aspects such as content structure, communication process, business strategy, etc., and needs strong technical support in addition to content. Digital media is an emerging profession born from the combination of computer technology and media, characterized by interdisciplinary features. Our country's mechanisms and educational concepts for digital media training lag behind digital development. The training content and methods do not match the direction of modern society's informatization and intelligent media development[8].

(2) Need to Improve Teaching Staff

To train digital media talents, a new type of teaching team must be established. High-quality teaching teams are an important guarantee for digital media education training and improving the quality of digital media teaching. At present, in most universities' teaching teams, teachers with a complex knowledge structure of education and digital technology are extremely lacking. Many teachers engaged in professional teaching lack practical experience and frontline technology application experience, and they lack understanding of new media such as Chat GPT, and cannot pass on knowledge to students in teaching.

(3) Insufficient Investment in Key Laboratories

Digital media professional teaching cannot be separated from the establishment of open laboratories. If the experimental course is short, it will easily cause a lack of coordination and systematization between the experimental course and the entire course system. The lack of teaching materials, equipment, and facilities for experimental teaching in colleges and universities seriously affects the overall improvement of teaching level, highlighting various problems caused by limited practical teaching time and single teaching methods.

(4) Lack of Students' Practical Operating Ability

Digital media places strict requirements on practical operation and application abilities, so the practical link should have an important weight in the teaching system. The establishment of many universities' teaching practice systems is still restricted by factors such as faculty, teaching equipment, and teaching hours, resulting in many practical contents still remaining at the demonstration and verification stage. Students find it difficult to apply what they have learned to practice, causing digital media professionals to fail to use the latest media tools in a timely manner and a disconnection between teaching practice and social needs.

5. Talent Cultivation Path in the AIGC Context

With AIGC widely used in the field of digital media, it is urgent to respond to this situation from the perspective of digital media. From the perspective of talent cultivation, colleges and universities should judge the situation and actively respond to the demands of the times. The traditional media talent training model faces severe challenges. Digital media practice not only requires practical digital media talents, but also high-end talents who understand the forefront of the media industry, are familiar with cutting-edge media technology, and can lead innovation.

(1) Development of Interdisciplinary Education System

To formulate an open, cross-disciplinary, and integrated education system that promotes the construction of digital media majors across disciplines. With the emergence of digital new technologies such as mobile internet, cloud computing, big data, and artificial intelligence, the production methods, media forms, communication methods, and consumption patterns in the field of digital media have undergone tremendous changes, especially the application of AIGC, which prompts digital media to reshape the entire industry chain from upstream content generation to midstream content processing and downstream content distribution. In the current era of smart media, digital media integrates traditional art, digital technology, network audio-visual, and media among many fields, with new ways of expression. It integrates elements in social culture, science and technology, and daily life, presenting typical cross-disciplinary features. In setting up digital media majors, emphasis is placed not only on interdisciplinarity but also on applicability, helping digital media education to keep up with the trend of the times, relying on industry needs, and achieving the set goal of cultivating compound talents.

(2) Teacher Skills Training

Universities are important research bases, and teachers need to keep up with innovative theories and the use of innovative tools. They can learn about the industry's cutting-edge information by participating in academic conferences or practice new applications by attending training. University teachers need to participate in practical and application-oriented horizontal projects and topics. In the process of participating in research projects, they deepen the application of innovative theories and tools, open up their thinking, improve their research and innovation capabilities, and improve the quality of education and teaching.

(3) Increasing Investment in Key Laboratories

Increase investment in digital media laboratories and build a systematic digital full-process simulation platform to provide an overall practical platform for the capability cultivation of digital media professionals from product to operation. Through teaching case libraries and teaching management and other teaching software, the actual business system of digital media is restored, the technical implementation steps and principles of each link are broken down, and combined with multimedia communication theory, students' digital content production, digital content compilation, digital product release, digital content management, and digital product display operation practice capabilities are enhanced. Carry out corresponding experimental teaching through digital media content production and distribution laboratories to ensure that students, while familiar with the relevant theoretical knowledge, continuously enhance their skills training in digital media text generation, image and sound generation, content distribution and communication, and digital product editing and processing.

(4) Establish Unstructured Creation Training in Production, Learning, and Research

Traditional media organizes and distributes content according to certain grammar rules and established structures. In the field of digital media, "content" is digital, and many "contents" exist in an unstructured state. For example, hypertext is a web-like text that organizes text information in different spaces using hyperlinks. The unstructured nature of content provides a broader space for creation. "Creation" includes not only the processing of single media information mainly in text but also organizing data with databases, drawing charts, digitizing images and sound, electronic typesetting, etc. This requires the cultivation of unstructured creation ability.

6. Conclusion

Under the AIGC context, digital media uses emerging technologies such as the Internet, big data, and interactive media as its content creation and communication means, and combines text, images, sound, etc., as its language, realizing the digitization, visualization, and diversification of information. We must explore a digital talent cultivation model that focuses on users, links to the market, and adjusts the curriculum system according to market demand under the current trend. Keeping up with the times and market needs from the perspective of industry-education integration is not only the need for self-development of various colleges and universities but also the need for the development of digital media and the overall development of society.

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