



# Research and Practice on the Cultivation of Innovative Talents in Digital Marketing under the Context of AIGC

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**Abstract:** The rapid development of artificial intelligence technology, represented by generative AI(GAI), is profoundly transforming the digital marketing industry and bringing more opportunities and challenges. In response to the issues faced by higher education institutions in cultivating innovative digital marketing talents who can adapt to the AIGC (Artificial Intelligence Generated Content) era, such as the difficulty in matching technology with teaching content, inadequate interdisciplinary knowledge and practical abilities, and a lack of teaching resources, this article details the specific marketing applications of AIGC technology in various aspects. It provides guidance on practical methods and application cases for cultivating digital marketing talents. Looking forward to the development trend of digital marketing, higher education institutions and enterprises should work together to cultivate more high-quality and composite talents in digital marketing innovation to cope with the changes and challenges of the future market.

**Keywords:** generative AI, digital marketing, practical case

## 1. Introduction

GAI, a key branch of artificial intelligence, is transforming traditional digital content creation through advanced technologies like deep learning, enabling efficient and autonomous generation of text, images, audio, and more[1]. This innovation offers new opportunities for industry growth but also raises higher demands on marketing professionals' skills. Therefore, it is essential to enhance the quality of digital marketing talent by cultivating high-quality, versatile professionals suited to the AIGC (Artificial Intelligence Generated Content) industry. This will support technological innovation and industrial transformation, ensuring continuous emergence of new productivity[2]. However, amid the rapid growth of the AIGC industry, universities face challenges in training digital marketing talents, leading to a lack of innovative thinking and problem-solving skills among students, making it difficult for them to compete effectively in the market. This study aims to provide guidance and suggestions for cultivating digital marketing innovators in the AIGC era, promoting reforms in digital innovation management education.

## 2. AIGC-driven Transformations in Marketing

Artificial intelligence (AI) has advanced a lot recently, especially in chatbots. ChatGPT is a strong AI language model that can change many fields[3]. AIGC is becoming a key trend in digital marketing, bringing big changes and new chances. It helps update the marketing industry but also creates challenges for marketers.

### 2.1 Content Production Innovation and Personalized Marketing

Driven by GAI technology, digital marketing content production has undergone a major transformation. Automated generation of text, images, and videos greatly boosts efficiency, allowing marketers to quickly adapt to market changes and adjust strategies flexibly. Meanwhile, AIGC deeply analyzes user data to deliver personalized content, providing each user with a unique experience and significantly improving conversion rates and customer satisfaction.

### 2.2 Cost Optimization and Precision Marketing

Traditional content creation often requires many creative staff and a lot of time for planning, writing, and editing. AIGC technology, however, can automatically analyze large amounts of data and generate high-quality marketing content — like articles and ads — using preset templates or algorithms, greatly reducing the need for human effort. For example, social media platforms use AI to analyze users' browsing and interactions to deliver personalized ads and automatically create timely content such as news summaries, weather updates, and sports scores. Additionally, AIGC leverages big data and machine learning to better understand user preferences and market trends, enabling precise content targeting that boosts user engagement, satisfaction, and conversion rates.

## 2.3 Innovative Marketing Formats and Market Expansion

With ongoing advances in AIGC technology, marketing strategies will see endless innovation. Using deep learning and natural language processing, AIGC can mimic human thinking to create engaging and creative campaigns that better capture user attention. For example, combined with VR and AR, AIGC lets users enter AI-built virtual worlds, experience brand stories, and interact with virtual characters. Additionally, AIGC powers intelligent customer service and chatbots, offering 24/7 personalized support by accurately understanding users' needs and providing tailored solutions.

## 3. Bottlenecks in Cultivating Innovative Digital Marketing Talent

### 3.1 Mismatch Between Technology and Teaching Content

GAI technology is rapidly evolving, with new algorithms and innovations emerging constantly. However, the education system updates curricula and teaching content relatively slowly. As a result, colleges and universities often struggle to keep pace with technological advancements, causing the knowledge and skills students acquire to become outdated by the time they graduate. This lag between technology and teaching content not only hinders students' mastery of cutting-edge tools but also risks a skills gap in their future careers, making it challenging to meet the industry's demand for digital marketing talent.

### 3.2 Integration of Interdisciplinary Knowledge and Practical Skills

The field of digital marketing in the AIGC era requires knowledge and skills from multiple disciplines, including computer science, data science, marketing, and creative design. However, traditional education often treats these disciplines separately, resulting in fragmented knowledge. Students struggle to integrate these areas into a complete AIGC digital marketing skill set. Additionally, limited practical opportunities and platforms hinder students from applying their knowledge to real projects, causing a gap between theory and practice. This lack of interdisciplinary integration and hands-on experience leaves students feeling unprepared for complex AIGC digital marketing tasks and challenges their ability to succeed in the field.

### 3.3 Faculty and Teaching Resource Development Issues

GAI technology is a new field, and there are not many teachers with experience in human-computer collaborative teaching. Teaching GAI focuses on skills, so teachers need both strong theoretical knowledge and practical AI experience, as well as industry insight, to teach students the latest AI and marketing skills[4]. However, few college teachers currently have these qualifications, making it hard to meet teaching needs. At the same time, teaching materials like textbooks and practice cases are often lacking or outdated, causing uneven teaching quality and making it harder to build good faculty and resources.

## 4. AIGC Context in Digital Marketing Talent Development Methods

### 4.1 Basic Theory Teaching

Before using AIGC technology in digital marketing, students need to understand its basics. Learning about deep learning, natural language processing (NLP), and computer vision helps them know how AIGC works. AIGC includes text, audio, image, video, and virtual digital people generation, which are important for marketing. Table 1 shows these parts. This helps students see how useful AIGC is for marketing.

Table 1. AIGC Digital Marketing Applications section

Applications	Introduction	Marketing Application Scenarios	Mainstream tools
Text	Interactive generation:intelligently generate feedback based on user needs.; Non-interactive generation:automatically create titles and content to enhance efficiency.	Journalism, advertising copywriting, social media content creation, etc.	Chatgpt, Deepseek, ERNIE Bot, Kimi, Bean Bun, IFlytek Spark
Audio	Intelligently generate personalized audio by integrating text, audio, image, and video inputs, customizing elements like timbre, tempo, and duration.	Podcasts, voice ads, intelligent customer service, customized audio sounds	Suno, Audio craft, ElevenLabs, Voicemod
Image	By editing, modifying, and creating images, users can generate visuals tailored to specific scenarios, meeting diverse display needs.	Poster customization, product design, illustration design, image restoration	Midjourney, Tiamat, Stable Diffusion XL, Adobe Firefly
Video	AI technology is used to generate and enhance video content through precise editing, resolution upscaling, and improved special effects, ensuring high-quality visuals and meeting diverse marketing needs	Picture quality restoration and enhancement, motion picture production, video advertisement production, microfilm	Sora, Pika, Runway, Kling AI
Virtual digital	Supported by NLP, speech recognition, and computer vision, virtual humans can understand language better and look more realistic, making real-time interactions more natural and flexible.	Virtual e-commerce anchors, virtual hosts, digital human bloggers	Heygen, D-ID, YouYan, Wondershare Virbo, Tencent ZenVideo

## 4.2 Teaching of Usage Methods

After studying the relevant theories and application areas, mainstream and user-friendly AIGC tools can be selected for teaching based on their application in different fields. Each tool's usage should be broken down into clear, detailed steps, making it easy for students to understand and operate. This approach helps students become proficient in using various GAI tools for digital marketing practice.

### 4.2.1 Social Media Content Generation

Social media is an important way for brands to connect with consumers, but creating good posts is often challenging[5]. AI tools like Vincennes can quickly generate high-quality copy that fits the brand and attracts the target audience.

For example, ERNIE Bot helps create RedNote content fast. First, choose a topic like beauty, travel, or food. Then, register and log in on the official website or app. Enter keywords related to the topic, set language, length, and style, and click "Generate." After a short wait, the AI creates the content, which you can edit to fit your needs.d the specifications of the Little Red Book platform.

### 4.2.2 Customized Background Music

In digital marketing campaigns, the skillful use of background music and sound effects plays a crucial role in enhancing appeal and deepening emotional impact. With advanced GAI tools, creators can easily transcend traditional boundaries to customize unique soundtracks and effects tailored to their projects.

Take the music tool Suno as an example. The process is as follows: first, visit the official Suno website and register an account using Discord, Gmail, Outlook, or other supported platforms. Next, select either "Instrumental Mode" or "Custom Mode" based on your needs. Then, input style cues and lyrics if desired, or generate purely instrumental music without lyrics. Click the "Create" button to have Suno generate music according to your input. After a brief wait, preview the generated music and make any necessary adjustments. Finally, export the finalized track in your preferred format and share or apply it using the platform's sharing features.

### 4.2.3 Creative Graphic Material Generation

In today's visual world, good graphics are important for catching attention and showing a brand's message. But making graphics that match a brand takes a lot of time and work. AI can help marketers quickly create attractive and clear images, making marketing better.

For example, with the Tiamat AI tool, you:

- (1) Set your design goals, style, and elements.
- (2) Register and open the tool.
- (3) Choose settings like style and size.
- (4) Enter keywords or prompts in English and Chinese.
- (5) Click "Create" to get several images, then adjust them if needed.

Tiamat also lets you upload sketches or outlines, and AI will add colors, textures, and lighting to make them look real. You can upload photos and change their style while keeping the original look. Using these images with tools like Photoshop, you can finish designs for posters, product displays, and more. Sample results are in Figure 1.

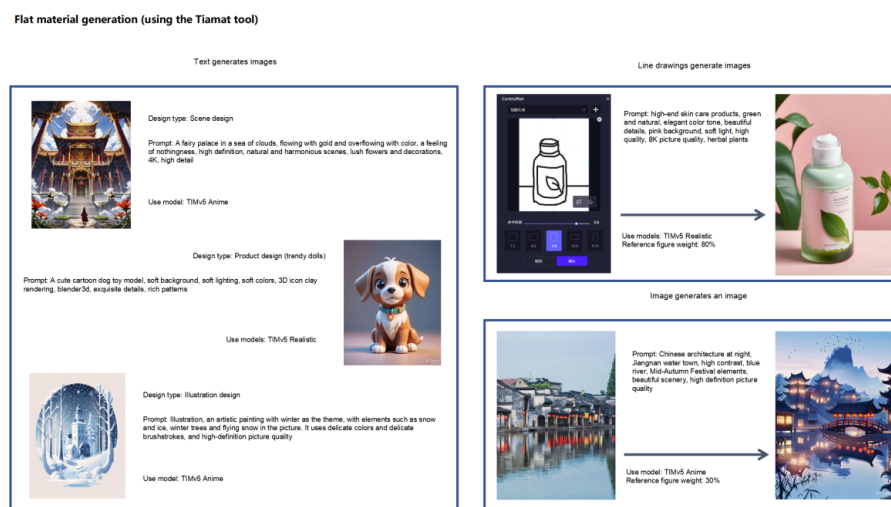


Figure 1. Graphic material generation results

4.2.4 Digital Human Video Production

Virtual digital humans are now widely used in areas like customer service, digital marketing, training, and social media. They lower labor costs while improving video quality, boosting engagement, building brand identity, and increasing customer satisfaction.

For example, with the Arigato AIGC tool:

- (1) Register and log in.
- (2) Choose a digital human model, voice, and video size.
- (3) Enter a script (e.g., product intro or event promo), with support for multiple languages.
- (4) Add background images or use platform templates for a better visual match.
- (5) Set gestures and facial expressions for a more natural presentation.
- (6) Click “Generate” to preview and adjust speech speed, tone, or script if needed.

With D-ID, users can:

- (1) Log into the site and upload a clear front-facing photo or use a preset template.
- (2) Enter the text to be spoken, choose the language, voice type, and style, or upload an audio file.
- (3) Click “Generate video” to produce the final output.

4.3 Case-based Teaching

Based on AIGC theory and an exploration of various marketing sectors, combined with existing domestic and international AI tools, practical application cases relevant to digital marketing in the AIGC context have been refined. Through case-based teaching, theoretical knowledge and operational skills related to AIGC technology are integrated with practical applications to enhance students’ hands-on abilities and innovative capacity.

The intelligent intervention of AIGC technology in content creation follows a progression from text to image to video, thereby expanding the breadth of information expression[6]. Current AIGC technologies enable seamless conversion and interoperability across multiple modalities, including text-to-image, text-to-sound, and text-to-video, facilitating cross-modal integration in digital marketing. A typical example is the production of digital oral broadcast videos, as illustrated in Figure 2. This process involves customized scene selection, script generation, merchandise display mapping, and audio synthesis, all achieved through the AI tools mentioned earlier. This exemplifies the cross-modal application of AIGC technology, driving innovation and integration within the marketing industry through deep semantic matching across modalities. Moreover, it offers a valuable practical case for training digital marketing talent.

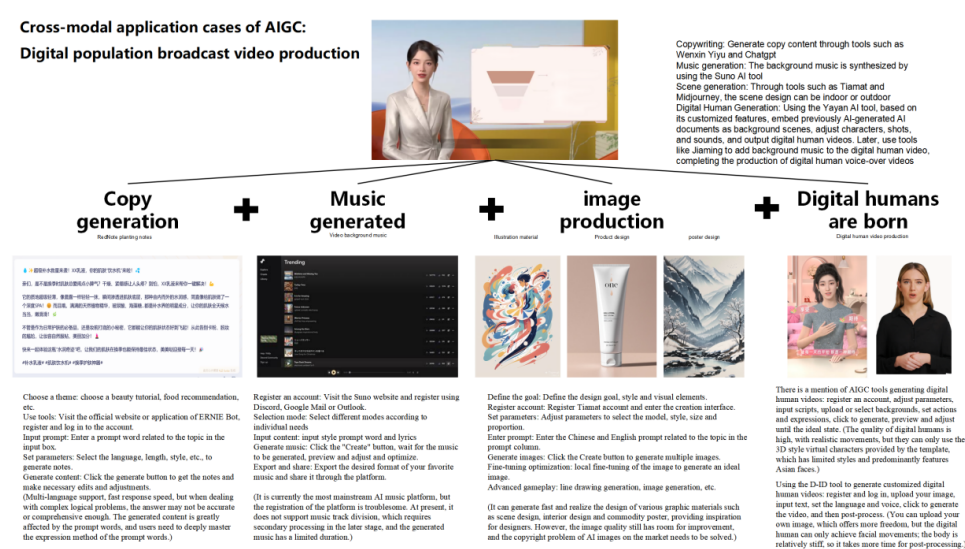


Figure 2. Example of digital demo video production

4.4 Learning Through Competitions

Learning through competitions is an effective approach to cultivate innovative digital marketing talents suited for the AIGC era. By organizing or participating in various digital marketing innovation contests—such as AI Marketing Creativity Competitions, AIGC Creative Design Contests, and Digital Marketing Case Challenges—students are encouraged to

develop innovative thinking and practical skills. These competitions require students to integrate their knowledge, analyze market trends, formulate marketing strategies, and leverage AIGC technologies for creative execution. This process not only enhances teamwork and problem-solving abilities but also deepens students' understanding of the practical applications and value of AIGC technology.

## 5. Conclusions and Outlook

With continuous technological advancements, traditional education models increasingly struggle to meet modern students' learning needs. Practical use of AI tools has become essential in training digital marketing talents. This paper analyzes how AIGC technology deeply impacts the marketing industry by transforming content creation, optimizing costs, and expanding market opportunities. These changes improve marketing efficiency and offer users richer, more personalized experiences.

However, colleges and universities face challenges in cultivating innovative digital marketing talents amid rapid AIGC development. To address this, educational institutions must update curricula regularly, strengthen partnerships with AI industries, and emphasize practical case teaching. Using GAI tools like ERNIE Bot and Tiamat, students can apply theoretical knowledge in real scenarios, enhancing their digital skills and creativity for the marketing field.

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