The Management of Internet Content Products in the Era of Artificial Intelligence

Lin Yu, Zhenli Lai*
Xiamen University of Technology, No.600, Ligong Road, Jimei District, Xiamen, China,361009

*69952788@qq.com

Abstract. Artificial intelligence affect the management of internet content products. This paper defines the internet content products, figures out the model of internet content production process, proposes a profit model of Internet content operation. It also summarizes the impact of artificial intelligence on the operation of Internet content products.

Keywords: Artificial intelligence, Internet content products, Operation impact

1. Definition of Internet content products

1.1. Definition of Internet content products
Internet content products, in a broad sense, refer to information content products and services disseminated on the Internet, which mainly include online entertainment, online media, online education, and online publishing[1]. In a narrow sense, Internet content products are information content with copyright as the core. They are information content received by audiences through the Internet. They are classified according to the type of information content, including online news, online video, online music, online literature, online games, and online communities, online education, etc. The dissemination carriers of content products include search engines, portal websites, vertical websites, video websites, music websites, literature websites, game websites, social media, and corresponding smart terminal applications.

1.2. Internet content production process
The production and consumption of internet content is the process of information content flowing between content creators, disseminators, and audiences. The production, exchange, and consumption of content are closely related to the Internet[2]. The specific process is as follows:
In the Internet era, entertainment, information, and social networking constitute the three major sectors of Internet information content. Information content products are uploaded to web portals, web search, e-commerce platforms, and applications via the Internet, and audiences use computers, laptops, smartphones, tablet computers, various smart terminal devices such as digital televisions and wearable devices receive information and participate in interaction to complete the consumption of content products. In the Internet age of the people’s carnival, the boundaries between the communicators and recipients of online content products are becoming increasingly blurred. On the one hand, Internet companies, traditional media, and professional production organizations produce and upload a large number of information content products for the Internet. The user has also become an important producer of Internet content products. From forums, blogs, Weibo, WeChat, reviews to original music, micro movies, videos, and novels, grassroots netizens have become an important creative force for Internet content; on the other hand, netizens are certainly the main audience of online content. Online companies, traditional media, and various professional production organizations also use online content to learn about information and find materials. The communicator and the recipient are constantly intersecting and exchanging roles, and transmission and reception are unified. It has become a prominent and important feature in the production and consumption of Internet content.

1.3. Profit model of Internet content operation
The business model of the Internet content industry is a profit model built around the operation and sales of Internet content products. With the continuous innovation of Internet products, various emerging Internet content industry business models are also emerging.

1.3.1. Advertising model
Advertising is the earliest and still the main important business model of the Internet content industry. First traffic and then monetize, attract users through high-quality content, and then collect advertising fees from advertisers based on the number of users or content clicks to make up for content production or purchase costs and obtain profits. The "second sale" of traditional media has formed the habit of audiences obtaining free content by watching or listening to advertisements. This habit has also migrated to the Internet, making advertising the most important profit model for Internet content management. According to iResearch Consulting 2019 annual Chinese online advertising core data show that China's online advertising market reached 646.43 billion yuan, affected by the overall downward impact of the economic environment, China's online advertising market of 2019 grew 30.2% and declined compared to 2018. However, the vitality of online advertising is still strong, and the market size is expected to exceed the trillion mark in 2022.

1.3.2. Fixed service fee model
Provide users with content or services within a certain time limit by charging a fixed service fee. This is the package sales method of content products. The music VIP service "Green Diamond Listening Edition" jointly launched by China Unicom and Tencent, users pay 15 yuan a month, enjoy online music listening, downloading, and playing MV package traffic on the QQ Music mobile client and Tencent Green diamond privileges which worth 10 yuan/month. Fees for paid mailboxes and WeChat subscription accounts are also paid on a monthly or annual basis to obtain profits.

1.3.3. Retail model
Online and piece-by-piece download authorization for digital content products is also the most direct sales model for Internet content products. The online charging reading model of online literature websites is that readers pay reading fees to the website in units of chapters, and authors obtain remuneration through sharing with the website, forming a healthy and sustainable growth model. "free trial + paid underload" has become the single issue of network business model. In addition to music websites and search engines, social media has also begun to set foot in the field of music distribution due to the power of its fans, creating new sources of income.

1.3.4. Subscription fee model
The subscription fee model first started with RSS subscription. Users paid monthly or annual payments to get the push of customized content. Different from the fixed service fee model, RSS subscriptions are personalized content customized by users. RSS subscriptions are generally divided into a free version and a paid version, and the quantity and quality of information obtained by the two are significantly different. The more well-known RSS subscription services include Google Play Newsstand, Feedly, Reader, etc. In China, there are Fresh Fruit Reading, Nine Point Reading, Youdao Reading, and NetEase Cloud Reading. There are also some professional information companies that provide users with specialized information content, charging monthly fees ranging from ten yuan to several hundred yuan or even thousands of yuan, providing professional information such as investment guides and financial information.

1.3.5. Virtual currency
The virtual currency model is widely used in online games, instant messaging, and SNS-type sites. Users can purchase virtual currency through recharge, or complete certain tasks (upload documents, online duration, or complete game tasks) to obtain virtual currency. Currency can be used directly as currency within a specific network. Virtual currency can not only pay for service fees, but can also be used to purchase virtual equipment, virtual gifts, virtual daily necessities, and can also be used to purchase some personalized value-added services. The emergence of virtual currency has also spawned some emerging professions, such as professional players who specialize in earning virtual currency for people. Currently, there are no less than ten virtual currencies in circulation on the market, such as Q coins, U coins, Baidu coins, bean dollars, cool coins, Warcraft coins, silver patterns, chivalrous ingots, etc. Industry insiders estimate that the domestic Internet already has a virtual currency market of several billion yuan a year, and it is growing at a rate of 15% to 20% per year.

1.3.6 Commission model
Internet companies obtain shares or withdraw commissions by providing intermediary services, and the media agency fees of online advertising agencies are generally drawn in accordance with the commission model. The rise of various Internet innovative business models has given birth to many new industries. The MCN organization, the core support team surrounding the production and operation of internet celebrities, is through the creation and launch of web celebrities, and by rewarding commissions and creating business opportunities to realize traffic monetization and commission.

1.3.7 Crowdfunding
It refers to the model of raising project funds from netizens in the form of group purchase + pre-purchase. Crowdfunding uses the characteristics of the Internet and SNS communication to allow small businesses, artists, or individuals to show their creativity to the public, win everyone's attention and support, and then obtain the necessary financial assistance. The crowdfunding model is generally that the project sponsor cooperates with the crowdfunding platform to release product or project information. Netizens use the crowdfunding platform to pre-purchase or invest. The funds reach the predetermined goal, that is, the crowdfunding is successful and the project is implemented. Crowdfunding platforms charge varying percentages of commissions for successful projects. Initiators receive project implementation funds, and supporters receive products or other rewards. The crowdfunding model is divided into purchase model and investment model accordingly. In addition to projects such as crowdfunding cafes, in recent years, crowdfunding creative products, crowdfunding books, and crowdfunding movies have all been widely used. Product crowdfunding, public welfare crowdfunding, equity crowdfunding, and bond crowdfunding are currently the four main types of crowdfunding.

1.3.8 Influencer marketing
The live stream mainly refers to the behavior of streaming online by enterprises and individuals (hosts, Internet celebrities) through the public network platform. The main content of the live stream is the
interaction between the audience and the anchor, which has strong emotional and social attributes. In 2019 influencer marketing overall turnover amounted to 451.29 billion yuan, an increase of 200.4%, accounting for the overall size of online shopping 4.5%. In February 2018, the live stream function of Douyin was officially opened. In March, it cooperated with Taobao and started a new channel for rapid video realization. The entertainment live stream model with singing, dancing, chat plus rewards as the main mode was transformed into a shopping live stream mode. Up to 51.6% of users clicked on the third-party e-commerce platform to shop in the live stream. Influencer marketing has become a new way to monetize high-quality Internet video content.

2. The impact of artificial intelligence on the operation of Internet content products

2.1 Media Convergence
Multi-screen and cross-device will become the norm for Internet content consumption. The Internet has subverted the media industry. After entering the era of artificial intelligence, unprecedented diversification of content, higher efficiency of content production, and diversification of content display methods have enabled the dissemination of information to integrate the characteristics of different media, presenting multimedia and sound Readings, video mobile newspapers, high-definition pictures, multimedia magazines, interactive animations, AR games... Internet content forms are also constantly being disrupted.

2.2 Content production and distribution of smart technology
In the era of artificial intelligence, relying on big data, deep learning, cloud computing, and other technologies, the production, and distribution of content has also entered the era of intelligence: the deep learning of artificial intelligence and cloud computing integrates more cultural content elements that human creation cannot reach to produce the more abundant IP products, at the same time, artificial intelligence technology based on user data analysis and forecasting, faster, more accurate information on generating user favorite show the way. Algorithms also make the distribution of content more accurate and faster. In addition, artificial intelligence technology also brings users virtual scenes, as well as an interactive experience between the virtual scene and reality scenes.

2.3 User-centric
"User-centric" concept in the era of artificial intelligence content production reflected more obviously. For Internet content management, users are no longer just consumers and users of content products and services, but also creators of content products. The huge user database and intelligent algorithms enable content producers to grasp the content consumer from the "group" to "individual", the user picture from the preferences of topics to selected form, from social habits to consume scenes unfold before the content producer. This also provides accurate data feedback for material mining and video content creation. Therefore, the entire network content industry will pay more attention to the role of users in the future development process, pay attention to the needs of users, and tap the potential creativity of users. It is foreseeable that the "user-centered" concept will inevitably promote the humanization and individualization of Internet content operations.
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