Enlightenment of Pay-to-Read to Information Technology Industry

Wei-feng ZHEN[1,a], Jian-min HE[2,b*]

[1] *School of Journalism and Communication, Minjiang University*，*Fuzhou, Fujian 350108;*
[2] *Hebei Polytechnic Institute*，*Hebei*，*Shijiazhuang 050091.*
[a]*E-mail*：*272922478@qq.com*
[b*]*E-mail*：*31760433@qq.com*

ABSTRACT

To understand the impact of mobile pay-to-read on the digital publishing industry. A questionnaire survey is conducted to collect data from 322 mobile reading users, In-depth interviews with 3 IT industry experts. The rapid development of mobile media has greatly changed users' behavior in using media, and readers relying on traditional media gradually become e-readers. Mobile readers will leave more user data in the Internet compared to other digital publishing users.The digital publishing industry should, according to the changes of users' situation, and on the premise of maintaining the orientation of digital publishing, speed up the development pace of intelligence, socialization, and verticalization in a timely manner to meet the needs of young users for mobile reading.

Keywords: *Pay-to-read; new media; digital publishing; users*

1.INTRODUCTION

According to the data released by China Internet Network Information Center, as of June 2020, the size of China's Internet users had reached 1.011 billion, of which 1.007 billion were cell phone users, with 99.6% of Internet users using cell phones to access the Internet. [1] The surge in the number of Internet users, especially mobile Internet users, has led to the rapid growth of the digital media industry, and new changes in the information receiving habits of Internet users have emerged, and Internet reading has become an important media usage habit of Internet users. According to the newly released 2019 China Digital Reading White Paper, China's digital reading users had reached 470 million by the end of 2019, with users paid to read beginning to decrease and the number of free reading users increasing, making free reading an important growth point for the digital publishing industry. [2]

Digital paid reading, as a microcosm of the digital publishing industry, is of great significance. As digital paid reading has entered the second half of the game from rapid user growth to user shrinkage, the digital publishing industry can discover changes in user demand in the process of observing users' paid reading habits and plan ahead for the second half of the digital publishing
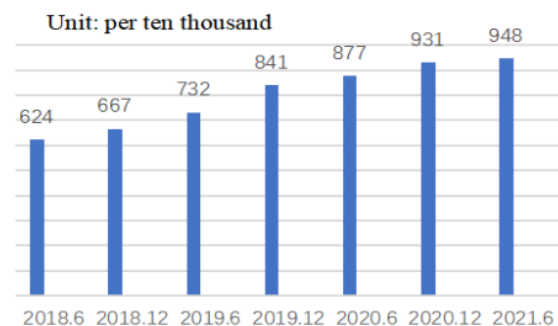
industry.

Source: Ministry of Industry and Information Technology

Figure1：Number of mobile phone base stations

Figure1：Number of mobile phone base stations

2. THE CURRENT SITUATION OF PAY-TO-READ

The so-called online paid reading refers to Internet users' access to text or image information provided by network operators by paying a certain fee online or offline (mainly online). Online paid reading is considered to be Business To Customer (B2C) model in the field of digital publishing, where the two sides of a paid online reading transaction are the online user and the online content provider.

In March 2011, the New York Times was the first to launch online paid reading, and it introduced the concept of paywall, which is intended to increase media revenue through paid reading by online users, reduce the dilemma of declining digital media advertising revenue, and minimize online media's reliance on advertising. [3] "Paywall" keeps the free readers out of the "wall", and the web readers can only see the information if they pay for it. Paid online reading has opened a new chapter in the digital publishing industry, changing the operating model of digital media that relies mainly on advertising revenue. 2016 is known as the first year of paid reading in China, followed by a rapid growth trend of paid reading users. Traditional paid reading content producers generally belong to Occupationally Generated Content (OGC), with relatively high-quality content.

A questionnaire survey is conducted to collect data from 322 mobile reading users, and the survey results show that , the online reading contact rate of adult nationals was 79.2%, the cell phone reading contact rate was 76.1%, the e-reader reading contact rate was 24.2%, and the iPad reading contact rate was 21.3%. Online paid reading has grown rapidly along with the rise of mobile media, maintaining a growth rate of more than 30% for three years from 2016-2018, before beginning to decline in 2019. The 2019 China Digital Reading White Paper released in April 2020 shows that the size of China's online digital reading market reached RMB 28.88 billion, and the average amount that online reading users willing to pay for a digital publication are willing to pay for a single digital publication is RMB 18.9, with 50% of users willing to pay more than RMB 20. [4] Pay-to-read is mainly based on the purchase of original online literature and digital publications. Data show that in 2019, China's online literature users reached 430 million people, and mobile Internet access traffic consumption for online reading reached 71.11 billion GB. Zhihu live and FanDeng Reading Club have become the best in pay-to-read.
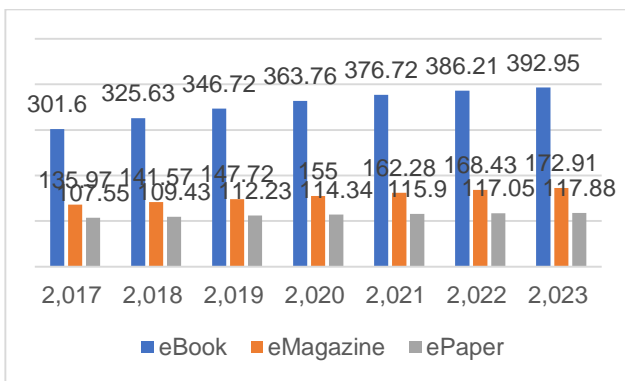

Data source: data.imedia.cn

Figure2：Hina e-publication user distribution segmentation forecast 2017- 2023 (per ten thousand people)

Currently, there are more forms of paid online reading in China, and payment can be made both online and offline. The digital publishing industry offers various forms of purchase services to facilitate the different reading habits of online reading users. The forms of paid online reading can be broadly categorized into the following four forms.

The first type is user-subscribed online content. This is generally paid in advance by the user, and the digital publishing company provides information to the user on a regular or occasional basis. This is the original form of pay-to-read, and digital newspapers are used to provide news and information to users through paid subscription reading.
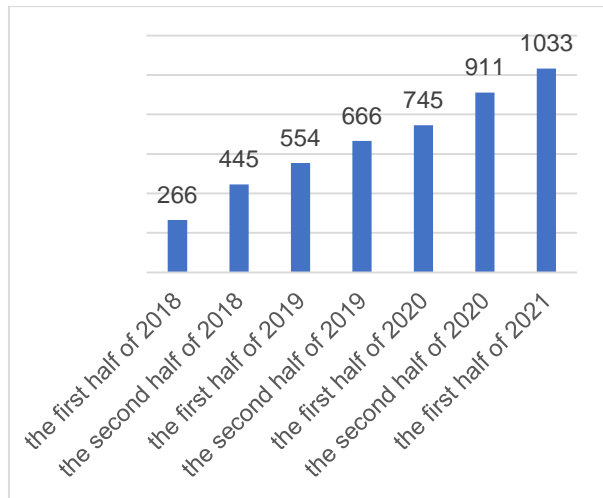
Source: Ministry of Industry and Information Technology

Figure3：Access traffic of mobile Internet

The second is the individual text purchase, where users pay for specific online literature or online books and download these texts to mobile media for reading. China Academic Journals currently offers the purchase of individual texts for reading, and users can purchase a specific text and save it for repeated reading, regardless of the number of readings.

The third type is rental reading, this form is similar to library borrowing books, to be returned at a certain time. Users rent the content they want to read for a relatively small fee and read it for a specified period of time, which is generally less than the cost of individual text purchases, but with significant time constraints. Dangdang Cloud Reading App provides users with network rental reading service, users can rent the platform's digital publications after opening permission.

The fourth type is monthly subscriptions, where users pay a monthly fee in a specific online reading App and can browse all the digital publications offered by that App for a month. The data shows that post-90s users are more likely to use monthly subscriptions for reading. MIGU READ APP 7.0 has launched a monthly reading service,

users can pay 9.9 RMB per month to browse 500,000 digital publications of the App.

3. THE CHARACTERISTICS OF MOBILE READING USERS

Internet users are mainly young people, network paid reading with the Internet, especially the mobile Internet to provide users with information, the majority of the post-90s into the network paid reading users, the post-00s reading group is also beginning to take shape. Post-90s users generally have full enthusiasm to like brainy and hairy set of information, showing trends such as mobile and fragmentation, and online reading mainly focuses on suspense, knowledge, entertainment and other information.It was found through the online questionnaire survey of 322 mobile reading users,The characteristics of mobile reading users：

3.1Mobility

As young Internet users, mobility is a distinctive feature of this group. The proportion of Internet users using mobile media to access the Internet has been as high as 99.3% [4], and mobile media represented by cell phones and iPad are the main tools for users to pay for reading. Mobile media allows web users to read anytime and anywhere, changing the traditional reading mode.

3.2.Originality

Reading by paid web users is also characterized by originality. They are not only satisfied with getting information from the Internet, they also produce information for the use of web users, and this kind of information production is called UGC (User generated Content). Internet users are becoming writers for digital publishing, and they are constantly providing original content to the web. As the protection of intellectual property rights increases, the protection of originality of online reading works will become better and better, and original works will further increase.

3.3 Fragmentation

The reading habits of paid Internet users show incomplete and intermittent characteristics. Fragmented reading is a new form of reading after the emergence of digital publishing, and is an inevitable trend in the development of mobile media [5]. The reading habits of paid readers are strongly influenced by users' individual needs and feelings. Users can use fragmented keywords to understand the intent of digital publications and then decide whether to read deeply.

3.4 Socialization

Internet reading users are originally members of social life and have their own social circles. Digital reading enables online reading users to find readers with similar interests to their own through social software or behavioral analysis, and also to share their reading feelings and experiences with other users through comments. [6] Mutual comments among online reading users have become an important platform for maintaining social interaction.

3.5 Scenario-based

The mobile nature of online reading users has brought about a constant change in the reading scene, and the contents that users read at different times and locations can vary significantly. [7] Each scene changes from waking up to the workplace is accompanied by digital reading, and the user selects the reading content that is appropriate to the scene in which he or she is in a particular scene.

3.6 Audibility

Young Internet users are also showing a tendency to listen to books, transforming their original reading books into listening books. "Listening to books" is a form of audio reading on the Internet, which allows users to receive content on the Internet without interfering with other tasks. The user can listen to text messages as if they were songs, and the convenience of reception is further enhanced.

4. THE CURRENT SITUATION OF CHINA'S DIGITAL PUBLISHING

The Annual Report on China's Digital Publishing Industry 2020-2021 shows that China's digital publishing users are showing steady growth and the market scale is expanding. In 2020, the annual industry revenue exceeds one trillion yuan, reaching 1178.167 billion yuan, an increase of 19.23% over the previous year. Of these, mobile publishing (including mobile reading and mobile games) generated RMB 244.836 billion in revenue, online education generated RMB 257.3 billion, Internet periodicals generated RMB 2.453 billion, e-books generated RMB 6.2 billion, digital newspapers (excluding mobile newspapers) generated RMB 750 million, blogging-related applications generated RMB 11.63 billion, online music generated RMB71 billion and online animation generated RMB23.87 billion. The revenue from online music was RMB 71 billion and online animation was RMB 23.87 billion. [8]

Throughout the Annual Report on China's Digital Publishing Industry 2020-2021, mobile publishing business accounts for a relatively large share, which is also in line with the characteristics of the mobilization of paid online reading users, indicating that the online usage habits of online users have shifted from traditional Internet to mobile Internet, and mobile digital publishing

has become an important direction for the development of digital publishing. In addition to the mobile publishing business, online education has become the second largest component of the digital publishing industry. Since the introduction of the Internet plus Education and the year-on-year increase in investment in education by Chinese families, the digital publishing industry has started to use the Internet to successfully earn profits from education industry and enhance its own educational function. Online games and online animation are the third largest market in the digital publishing industry. In recent years, capital has continuously entered the online game and online animation industry, driving the continuous rapid growth of the digital publishing industry.Through in-depth interviews with experts in the information technology industry:

4.1 "Content is King" - The Continuing Winning Argument for Most Publishers

With the great wave of digital publishing industry, a number of title party gradually withdrew from the digital publishing industry. Content-Orientation re-occupy the market. The digital publishing industry has reverted to content production as the primary means of attracting users, and digital publishers strive to provide quality content to users and try to avoid simply relying on AI to synthesize their works.

4.2 Capital Operation is Functioning

Digital publishing is also actively attracting capital to enter in the process of rapid growth, through capital operation to obtain more funds to fill the capital gap of digital publishing. In September and November 2017 Zhangyue Technology and China Literature Limited were listed in Shanghai and Hong Kong, through which they gained liquidity to further develop their digital publishing business.

4.3 Internet Literature is Still Emerging

Since 2017, online literature has maintained a good development, and the scale of contracted works and various writers has been expanding. With the continuous improvement of laws and regulations, the state has increased the protection of intellectual property rights for online literature. The trend in cross-media development of online literature is obvious, as online literature begins to move into movies, TV, games and paper books, and the trend of the same IP spreading to the whole media is obvious.

4.4 Steady Increase in Pay-to-Read Market

As an important part of the digital publishing industry, the market size of online payment continues to grow. The 14th Five-Year Plan for National Education issued by the

State Council clearly defines the policy of Internet plus Education. This brings new opportunities for the development and transformation of digital publishing. The digital publishing industry began to layout all kinds of education and training, and there are numerous products such as tutorials and teaching aids for users.

5. THE ENLIGHTENMENT OF PAY-TO-READ TO DIGITAL PUBLISHING

As an important part of the digital publishing, the mobile paid reading industry should also plan ahead and learn from the successful experience of mobile reading to actively layout the second half of the digital publishing industry to avoid the loss of users as the number of users shows a downward trend. On May 28, 2018, General Secretary Xi Jinping pointed out in his speech at the Congress of Academicians of the two academies that "we should grasp the opportunity of digitalization, networking and intelligent integration and cultivate new dynamic energy with information technology and intelligence as levers." "And promote the deep integration of the Internet, Big Data, AI and the real economy." [9] General Secretary Xi's speech is a guide for the development of Internet and the real economy. Digital publishers should consider and actively layout the new development stage of the digital publishing industry. The spirit of General Secretary Xi's speech combined with the characteristics of paid online reading users; the future development of the digital publishing should increase their effects in the following aspects.

5.1 Orientation: determine the way forward and guide user needs

Xi Jinping also pointed out that all aspects of news and public opinion work, all aspects should adhere to the correct public opinions. [10]

Comrade Xi Jinping clearly pointed out in the report of the 19th Party Congress, "Culture is a country and nation's soul. Our country will thrive only if our culture thrives, and our nation will be strong only if our culture is strong. Without full confidence in our culture, without a rich and prosperous culture, the Chinese nation will not be able to rejuvenate itself." [11] Digital publishing as a carrier of cultural communication, in the work of digital publishing, cultural confidence is also the key to move from a large publishing country to a strong publishing country, and moreover, the key to publishing to achieve its value of a strong country. "Adhere to the correct orientation of public opinion, attach great importance to the construction and innovation of means of communication, and improve the power of dissemination, guidance, influence and credibility of news and public opinion." [12]

The guidance for users is an important function of the digital publishing industry, which must always keep in

mind the awareness of propaganda guidance and adhere to the correct public opinion guidance in the dissemination of information. The demand of network users shows the tendency of gamification and entertainment. The digital publishing industry should guide network users correctly, help them to establish a correct view of media consumption, not to indulge in the entertainment function of the network, but to effectively play the resource sharing function of the network, learn scientific and cultural knowledge, and continuously improve their cultural cultivation.

5.2 Intelligence: focus on technological innovation and reform the publishing model

Marxbelieved that science and technology is the productive force, and Deng Xiaoping further pointed out that "Science and technology constitute a primary productive force". Xi Jinping pointed out that "science and technology constitute a primary productive force and innovation is the primary driving force for development." Canadian communication scientist McLuhan believes that "the media is the message". The communication technology itself is the source of social influence, and media technology is an important driving force of social development.

In the era of mobile media, information technology and intelligent technology are emerging, and artificial intelligence is beginning to be used in the digital publishing industry. The selection, review and proofreading, printing and distribution of digital publishing can be completed by intelligent programs. "The greatest enlightenment of AI on the publishing process is to build a set of automated, intelligent and systematic publishing process in due course to support both traditional and digital publishing business, so as to make the production, production and distribution of traditional books and digital products integrated, collaborative and synchronized." [13]

The rise of blockchain technology has also brought new technologies to the digital publishing industry. Digital publishing can realize multi-node storage of digital information with the help of blockchain technology to better preserve the originality of information. Blockchain technology is also conducive to the protection of intellectual property rights in digital publishing, better safeguarding the rights and interests of online information creators so that they can create digital products with peace of mind. The main functions of blockchain technology in digital publishing are shown in Table 1. [14]

Table 1. Function distribution of blockchain for digital publishing

Levels	Main Functions
Data	Copyright registration, copyright tracking, digital payment
Network	Information broadcasting, node verification, cooperation with third-party
Extension	IPFS decentralized storage, functional contract programming, sidechain development
Application	Editors and readers, account management, publication trading, digital signature tools, decentralized social platforms, etc.

5.3 Socialization: pay attention to user analysis for accurate communication

The social attributes of Internet users determine that each user has its own community of interaction. Digital publishers should analyze user data, know about the common communities of Internet users, and then provide social information dissemination according to different Internet users. Big data processing can provide accurate user data for the digital publishing industry, and provide accurate digital products for different users through big data analysis. The main characteristics of social reading of Internet users include "reader-centered, mobile Internet technology as the carrier, the accuracy of content provision and the social nature of reading behavior". [15]

Users make digital information choices through social community recommendations. Users meet friends with similar interests through social networking and recommend them to other members of the community through information sharing, thus expanding the reach of digital publications. The comment area is an important channel for digital publishing users to socialize, and comments in socialized communities can increase the stickiness between community members.

5.4 Verticalization: focus on content production and in-depth development

The digital publishing industry should continue to expand its business areas and use verticalization to develop the depth of digital publications. The same digital publishing IP can be filmed for movies and TV, or developed for online games and offline product development, in an effort to maximize the value of digital publishing IP.

Vertical product development can stick users in the content of digital publishing, while providing them with audiovisual information reception in addition to reading text. The digital publishing industry is expanding its business into film and television, offline products and other areas while maintaining digital publishing.

6. CONCLUSIONS

In short, pay-to-read model has brought changes in user habits for digital publishing, and the digital publishing industry should be familiar with the characteristics of paid online reading users in the next development, use new technical means to reform the traditional digital publishing industry, provide diversified and differentiated digital products to users through big data processing, artificial intelligence, blockchain technology, etc., and tap the depth of digital publishing through verticalization to develop and grow Digital publishing industry.

FUND PROJECT

REFERENCES

[1] CNNIC. The 48th Statistical Report on Internet Development in China. [EB/OL]. [2021-10-25]. http://www.cnnic.net.cn/hlwfzyj/hlwxzbg/hlwtjbg/202109/t20210915_71543.htm

[2] White Paper on Digital Reading in China 2019. [EB/OL]. [2020-4-25].http://www.xinhuanet.com/2020-04/23/c_1125896421.htm

[3] White Paper on Digital Reading in China 2019. [EB/OL]. [2020-4-25].http://www.xinhuanet.com/2020-04/23/c_1125896421.htm

[4] CNNIC. The 48th Statistical Report on Internet Development in China. [EB/OL]. [2021-10-25]. http://www.cnnic.net.cn/hlwfzyj/hlwxzbg/hlwtjbg/202109/t20210915_71543.htm

[5] WANG Y L. Making fragmented reading an effective way of guided reading of classics. Journalism Lover. 2015(03): 66-68.

[6] CHEN R H. From Self-Disciplined Subject to Pluralist Self: The Ethics of Social Reading. editorial Friend. 2018(08): 5-11.

[7] LI N. Artificial intelligence powers scenario-based knowledge services. China Newspaper Industry. 2018-8-6(013).

[8] How can traditional publishing get a share of "cakes" when digital publishing exceeds trillion in scale? [EB/OL]2021-10-20].https://www.163.com/dy/article/GNB9RCQ50512DFEN.html

[9] XI J P. Speech at the 19th General Assembly of the Chinese Academy of Sciences and the 14th General Assembly of the Chinese Academy of Engineering. [EB/OL].[2020-5-2].http://www.xinhuanet.com/2018-05/28/c_1122901308.htm

[10] XI J P. Adhering to the correct direction and innovating methods to improve the power of news and public opinion dissemination and guidance. [EB/O]. [2020-5-2]. http://www.xinhuanet.com//politics/2016-02/19/c_1118102868.htm

[11] XI J P. Report on the 19th National Congress of the Communist Party of China. [EB/OL]. http://cpc.people.com.cn/n1/2017/1028/c64094-29613660-9.html

[12] XI J P. Report on the 19th National Congress of the Communist Party of China. [EB/OL]. http://cpc.people.com.cn/n1/2017/1028/c64094-29613660-9.html

[13] LIU H D, MA W N, ZHANG X X. "Publishing plus artificial intelligence": smart publishing process reengineering. View on Publishing. 2018(01): 14-16.

[14] ZHANG Y. Research on Decentralized Digital Publishing Platform Based on Block Chain Technology. publishing Journal. 2017(06): 13-18.

[15] WANG H Y. A review of social reading research in China. Library Theory and Practice. 2015(3): 44-46.