The Impact of Technology Application on Service Marketing—Taking TikTok as an Example

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ABSTRACT

This paper aims to study the impact of the application of IT technology on service marketing by taking TikTok as an example. It mainly studies the technologies used by TikTok in platform operations and how these technologies affect marketing services. This article mainly adopted qualitative research methods, taking TikTok as the research object, and used qualitative research to explain the technical application and influence of TikTok in the service marketing process. In addition to the qualitative research method, this article also used the literature research method, case research, and participatory observation method. Through research, the application of IT technology enables users to have a good experience, enhances the user's sense of participation, and thus improves word of mouth. The application of IT technology has dramatically promoted service marketing.

Keywords: Service Marketing, IT Technology, TikTok.

1. INTRODUCTION

With the advent of mobile interactive technology, network technologies continue to update and progress. Users' consumption of mobile video content continues to ferment, with mobile short video taking the lead [1]. Short videos have a loyal audience. At the same time, the coverage rate of the whole network has also been rising. After entering the mobile Internet era, fragmentation is one of the most basic connotations. The rapid pace of life and the increasing pressure makes people no longer use it. The whole time is to reading, watching TV, and thinking deeply. In the era of information explosion, only relying on text and pictures for dissemination lacks information-carrying capacity. Therefore, it is short of combining text, images, sound, and video [2]. Video has become the preferred method, and many users love short videos due to their "short, flat, and fast" characteristics.

In the rapid development of the short video industry, TikTok is a dark horse, breaking out of the siege and taking the lead. TikTok was launched in September 2016, and Douyin's overseas version TikTok was launched in May 2017. In November 2017, Toutiao acquired Musical.ly, merged with TikTok, and developed. TikTok is the top ranking in the app store. Ranked second, with the camera and video category ranked first, TikTok has

experienced an enormous leap from continuous product polishing to user accumulation and, finally, qualitative change [3]. TikTok has entered more than 150 countries and regions and is ranked in the top ten in more than 40 countries' app stores, including the app store of the IOS system and the mobile phone stores under the Android system. TikTok is also the fastest growing in the world of fast mobile phone short video applications. According to the data report from the mobile data company Sensor Tower, in October 2018, TikTok's total global downloads have surpassed that of apps from well-known international companies such as Facebook, Instagram, Snapchat, and YouTube [4].

Service marketing is a series of activities taken by enterprises in the marketing process to fully meet the needs of consumers under the premise of fully understanding and satisfying consumer needs [5]. As a marketing mix element, service attracted people's attention in the late 1980s. Due to the advancement of science and technology and the significant increase in social productivity, industrial upgrading and specialization in production were accelerating. On the one hand, the service content of the product, that is, the service intensity of the product, is increasing. On the other hand, the market turns to the buyer's market with improved labor productivity [6]. As the income level of

consumers increases, their consumption needs and the level of demand gradually change as it has been enhanced and expanded to diversification [7].

Service marketing refers to the service process in which an enterprise adopts a series of integrated marketing strategies to achieve service transactions, and then to meet customers' needs for the service utility brought by service products, and complete the predetermined goals of the enterprise [5]. The core concept of service marketing is customer satisfaction and customer loyalty. By obtaining customer satisfaction and loyalty, we can promote mutually beneficial exchanges and finally realize the improvement of marketing performance and the long-term growth of the enterprise [7].

The rapid development of TikTok is inseparable from the high-quality services provided to users by the platform. IT technology has played an essential role in the service impact communication between TikTok and its hundred millions of users.

Some questions should be figured out:

1. What technologies does TikTok use in platform operations?

2. How do these technologies affect service marketing?

2. METHODS

This article mainly adopts the method of qualitative research, taking TikTok as the research object, and uses qualitative research when explaining the technical application and influence of TikTok in the service marketing process. Qualitative research is a method of studying human status, objects, conditions, ideological systems, or a series of events, aiming to systematically, truthfully, and accurately describe the facts discovered, as well as the relationship between the phenomena being studied [8]. In addition to the qualitative research method, this article also uses the literature research method, case research, and participatory observation method. The literature research method was conducted by searching the literature and materials related to short videos and short video platforms through the library and the Internet, including newspapers, periodicals, indexes, works, online literature, etc., to extensively study the existing research results [8]. Next, clarify the definition and characteristics of the short video platform and the development of TikTok. The case study method was carried out by listing some examples of the combination of service marketing and technology application that TikTok has done, which powerfully illustrate the vital role that technology application plays in TikTok service marketing. The participatory observation method was one by participating in the experience and observing the content, user behavior, and operation mode of users in

TikTok and analyzing the application of technology by TikTok in the service.

3. RESULTS AND DISCUSSION

3.1. TikTok Product Description

TikTok, known in China as Douyin, is a video-sharing social networking service owned by the Chinese company ByteDance. The app was launched in September 2016. Users can post their own works by shooting a short 15-second video, forming a kind of self-express while providing massive UGC (User Original Content) for the TikTok platform for the sustainable development of platform content [3]. In TikTok, users can show their interesting life and meet more like-minded friends and learn about all kinds of anecdotes. TikTok is essentially a short music video social circle focused on the younger generation. Users can select songs, soundtracks, supplemented by short videos, and make their own short videos [2]. TikTok users can use the speed of video shooting, post-video editing, special effects, filters, and other technologies to make the video more enjoyable, not just a simple mouth-to-mouth style. At present, most of the TikTok platforms are young Internet users. The core value of the Internet content platform lies in the exchange of information. The creators of information and consumers are equally important [9]. TikTok has become the largest content community platform through its efforts in product development, algorithm design, and platform operations. The platform where a wide range of users participate in content creation and content consumption has truly recorded the reality and beauty of the world's diversity, allowing many people, many locations, and many events to be recorded and disseminated in the form of images at the first time.

The objects of TikTok's services can be divided into three categories: content producers, content consumers, and users who place advertisements [9].

1. Content producers are those users who make short videos on TikTok;

2. Content consumers are the main user group of TikTok. They use TikTok to find and watch exciting videos, enrich their fragmented time, and have social topics to chat with friends. Such users can bring most of the DAU (Daily Active User) to the platform;

3. Users who place advertisements refer to some merchants and brands on TikTok. Advertising revenue is an essential source of income for TikTok.

3.2. Internet Thinking: Word of Mouth is King

Word of Mouth (WOM) is a crucial success factor for an internet company. According to Li Wanqing, the core

of Internet thinking is that word of mouth is king, and the essence of word of mouth is user's thinking, which is to let users have a sense of participation. In the past, when choosing products, people would make decisions through word-of-mouth recommendations from friends or experts, but it was not mainstream. Now that word of mouth is king, people are facing three essential changes in information dissemination [9].

1. The transformation of information from asymmetry to symmetry,

2. The rapid increase in information dissemination affects the space, and the scope of influence is unprecedentedly expanded.

3. Internet information is distributed in a decentralized manner. Every person is an information mode through social media and may become an opinion leader [3].

This change makes it necessary for Internet products to provide customers with a good user experience, increase user participation, and improve product reputation. Good services have also become particularly important. As a short video platform, technology has played an important role to enable hundreds of millions of users to get the services and experience they want [10].

3.3 The Impact of Technology Application on Marketing Services

3.3.1. Content producers: Improve users' sense of participation-everyone is a short video producer

Major network platforms currently have two content production modes, PGC and UGC. PGC refers to professionally produced content produced by specialized designers and producers of Internet products. UGC refers to user-generated content, a new mode of user use of the Internet-based on web2.0 [11].

TikTok uses UGC's video production model. "TikTok records a better life" is TikTok's slogan. From the slogan, TikTok pays more attention to users' needs. Compared with other platforms, TikTok uses short video recording provide audiences with a platform to show themselves [12] so that ordinary users can record their lives anytime and anywhere through the platform and share the beautiful moments in life.

Perceived ease of use and usefulness positively motivate the content production behavior of "post-90s" users. In the past, the threshold for video production was very high. It usually required professional equipment and professional video production software, which often needed huge learning costs. The emergence of short video platforms such as TikTok has lowered the threshold for users to shoot videos. TikTok uses face recognition and AI technology and adds various functions and filters. Its easiness to operate has

introduced a content production supporting tool - CapCut [11]. CapCut is mighty, making high-quality content easier. The output is more excellent, exciting, and beautiful. TikTok is a typical case of lowering the threshold of content production through operation and products. Through the operation, staff dig out interesting and cool content topics and create templates and let the top celebrities create first to attract more ordinary users to join in the creation. TikTok provides background music, filters, and even action templates. Users don't need to conceive the content. They only need to follow the template to create sophisticated and highly completed video content, reducing the creative threshold for producing interesting content [4]. The willingness of large users to make content and the enthusiasm for creation have enhanced users' sense of participation.

For example, TikTok previously introduced a filter for real-time hair dyeing, allowing users to choose their favorite hair color to record videos. Once this feature is launched, it has been loved by users. In addition, TikTok short videos are also very distinctive in terms of video editing. After shooting the video, users can choose slower or faster special effects to present these videos and add other interesting special effects.

The success of the short video platform lies in the decentralized intelligent recommendation algorithm. The intelligent recommendation is based on collecting big data for user portraits, analyzing the types of content that users like, and recommending the content that users care about most to users. The specific process involved in algorithm recommendation includes [13]:

1) Understand the content: abstract the content and extract keywords;

2) Understand users: characterize user behavior-click/like/comment/share/follow/dislike, explore user intent;

3) Match content for users: Fit a function of the degree of match between the content and the user, set a goal, and match the content with the user.

TikTok's core positioning for 15-second short music videos relies on interest tags as a driver and recommendation algorithm to distribute traffic. It helps users find the content they need quickly and completes the association between content creators and consumers. This technological advantage brings strong user loyalty [1]. According to Quest Mobile data, the DMU/MAU of TikTok has reached 0.45 (The DMU/MAU of the game industry with a high degree of immersion are between 0.3-0.6), and the per capita usage time reaches more than 90 minutes [11]. TikTok has reached the index of immersive Internet products. It means that through intelligent recommendation algorithm technology, users can see their favorite content without doing almost anything, thereby increasing the duration of use of the

TikTok app and enabling users to have a satisfactory and personalized experience.

3.3.2. Advertisers: Creative marketing and accurate advertising of advertising through technology

- Technology empowerment, creative marketing

With the improvement of technology, creativity has become infinite. While TikTok uses various technologies to enhance user experience and drive users to create, it also provides brand partners with more creative marketing imagination [1]. For example, when the new color scheme of the VIVO X21 mobile phone, Night Purple, was launched, VIVO hoped to create a fun and cool purple party through cooperation with TikTok, which will surprise users and amaze users. TikTok specially designed a new unique filter through face recognition and AI technology to achieve accurate makeup, making this special effect loved by most users and letting users feel the VIVO Night Purple's unique charm. The dissemination effect is also very remarkable. The event challenge video has 720 million exposures, 146,000 participants, 28.71 million interactions, and 3.2 million content interactions. It is a marketing experience that satisfies brand owners [3].

- Accurate placement of ads

Since TikTok platform was launched in 2016, short video advertising has become a vital profit model. Relying on the intelligent Internet, through the core drive of big data technology and intelligent algorithm technology, it implements intellectual and precise advertising methods for many potential and actual users [11]. For advertisers who are paying more and more attention to accurate delivery, this is undoubtedly to promote the value of accurate advertising to be maximized based on digging in the interests of users [13]. Multi-sensory intelligent advertisements will also be used on the TikTok platform through various forms of precise placement strategies and become a form of advertising that has attracted more attention and is more popular with users.

4. CONCLUSIONS

With the rapid development of Internet technology, the Internet industry is also developing rapidly. Unlike traditional industries, the Internet industry, with the help of IT technologies such as computing, big data, and AI, can serve more users and provide faster, more accurate, and more personalized services to customers. Through the case of TikTok, the role of technology in service marketing can be seen more clearly and concretely. For content creators, the platform can use technology to reduce the difficulty of making videos and increase users' enthusiasm for creating videos, thereby increasing the

sense of participation of customers. For content consumers, the platform can use technology to achieve personalized recommendations and improve user experience. For advertisers, creative marketing and precise advertising are carried out through technology to maximize advertising effects and satisfy customers. TikTok has successfully enhanced its reputation through the use of technology. In this Internet world where word of mouth is king, technology is undoubtedly one of the indispensable weapons of service marketing.

AUTHORS' CONTRIBUTIONS

REFERENCES

[1] Y. R. Dewi, "Creating Customer Engangement and Customer Value within 15 second : How Tiktok Works for Content Marketing," *Andalas Manag. Rev.*, 2021.

[2] K. Patel, "TikTok the New Alternative Media for Youngsters for Online Sharing of Talent: An Analytical Study," *J. Adv. Res. Journal. Mass Commun.*, vol. 7, no. 1, pp. 17–20, 2020.

[3] Y. L. Feng, C. C. Chen, and S. M. Wu, "Evaluation of Charm Factors of Short Video User Experience using FAHP-A Case Study of Tik Tok APP," in *IOP Conference Series: Materials Science and Engineering*, 2019.

[4] W. K. Wei, "Dynamic and Incentive Study of Master's Production Content of Short Video '90' UGC User Production," Beijing Foreign Language University, 2021.

[5] L. L. Berry, "Revisiting 'big ideas in services marketing' 30 years later," *J. Serv. Mark.*, 2016.

[6] Y. Hole, S. Pawar, and M. P. Bhaskar, "Service marketing and quality strategies," *Period. Eng. Nat. Sci.*, 2018.

[7] J. Wirtz and C. Lovelock, *Services Marketing: People, Technology, Strategy*, 8th Editio. World Scientific Publishing Company, 2016.

[8] H. Snyder, "Literature review as a research methodology: An overview and guidelines," *J. Bus. Res.*, 2019.

[9] W. Li, *A sense of participation: Xiaomi Word of Mouth Marketing Internal Manual*. 2014.

[10] T. J. Bacile, J. S. Wolter, A. M. Allen, and P. Xu, "The Effects of Online Incivility and Consumer-to-Consumer Interactional Justice on Complainants, Observers, and Service Providers During Social Media Service Recovery," *J. Interact. Mark.*, 2018.

[11] S. Jiayu, "Research on operation strategy of short video APP," Shenyang Normal University, 2019.

[12] A. Shutsko, "User-generated short video content in social media. a case study of tiktok," in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2020.

[13] G. Q. Guo and P. Y. Peng, "The construction of an algorithm actor's attention to the short video platform," pp. 23–27, 2021.