

Strategies for TikTok's Development from the Perspective of Information Interaction Design

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Abstract: With the arrival of 5G era and constant economic improvement, the everlasting evolution of the Internet and fragmentation of people's reading time laid the ground for the development of short-form videos. Short videos are a new form of communication where people can access knowledge and information to a maximum degree, and they present a new way of daily browsing and social interaction. On short video platforms, the transformation from "targets" to "users" has brought forth more new needs. ^[1]The application TikTok for one has achieved a rapid growth due to the celebrity effect since its launch in 2016, and gained support from many users with daily increase of online users on account of the consistent improvement of the app. As a major method of design, Information Interaction Design has been applied and expanded in more and more fields. TikTok's short videos are a medium during the process of information communication, and information interaction design, as a brand-new mode of information communication, plays a guiding role, partial to overall, during the information communication of TikTok videos, making the videos' information more entertaining and efficient. Indubitably, many aspects yet to be improved still exist in the content of TikTok videos. To fulfill the optimization of the communication effects and innovation of the communication content requires the platform's attention on multiple aspects. Only standardizing the usage of TikTok can make the content more transparent and positive.

Keywords: TikTok; Information interaction design; Information product

1. TikTok in the Tide of Short Videos

As a new viral trend on the social platforms for the last few years, short videos have become people's main activity of recreation and consumption. Up till June 2021, the scale of short-video users has reached one of 0.888 billion, taking up 87.8% of the total of the Internet users. ^[2] With the technological development, more and more information has been communicated via short videos, which has become an efficient method. Smart terminals have been popularized, and people in the post-modern era live a fast-paced life with more fragmented time. TikTok allows its users to view during their fragmented time conveniently with the videos' briefness and became one of the most popular media of information communication for the general public to receive information.

2. Categories and Characteristics of TikTok Videos

TikTok initially branded itself as a platform of musical short videos, but as it evolved, the platform came to exhibit a diversity of content. In the present times of diversified development, TikTok no longer limits itself within the musical category, and subsequently evolved into a platform with a variety of rich content of information from daily life to news of national events, one of a whole, short-time information source as if integrated by giant information websites. TikTok videos can be classified into five categories on account of their content.

2.1 Light and Funny

Funny light short videos are the most common type, created in mainly UGC mode and supplementally PGC mode. As people's needs for information consumption are varied, entertaining short videos with funny light content are the most pressure-relieving way for people under enormous life pressure. Content prioritizing humor receives the most views from people.

2.2 Recording Daily Life

Short videos which record daily life are also very common on TikTok, including the majority of users recording their daily routines from going to work in the morning to after work or their daily meals, as well as materials from what they see and hear during travelling as they record their life. The characteristic of this category is the users' longing for a beautiful life, and the audience it attracts also shares their longing and passion for life.

2.3 Talent Showcase

TikTok serves as a platform suitable for talent showcase where users attract followers by showcasing their talent from every way and gain more likes and followers by interacting with other users of the same talent.

2.4 Trends and Fashion Recommendation

The targeted audience mainly consists of the young generation, who passionately follows the new things and trends for them to imitate. The female group, which wants to know everything about beauty and skin care, fashion and looks, and the current trends, is the biggest targeted group. Videos in this category bring commercial value and many users introduce and recommend merchandise, attracting customers from their audience via TikTok.

2.5 Knowledge Popularization

Accounts such as CCTV-News use TikTok to release real-time information. There are also daily skills and knacks, popularization of historic and cultural literacy, and the currently hot national news. Official accounts mainly consisting of national organizations, local governments, and publicity organizations publish real and reliable news on the platform.

3. Information Interaction Design in TikTok

3.1 Information Interaction Design

The theory of Information Interaction Design originated from design science, a concept proposed by Hebert Simon. This type of scientific research deals with artifacts. As the currently foremost pioneer in design disciplines, Information Interaction Design commenced in the 1930s, brought forth by the founder of IDEO, Bill Moggridge, during a design conference in 1984, initially named as "soft face" and later changed to "interaction design".^[3] American scholar Shedroff pointed out an integration of Information Design and Interaction Design, considered to be one unified design theory. Shedroff argued for the common ground where Information Design, Interaction Design and Sensory Design overlaps each other, and named it Information Interaction Design.^[4] Information Interaction Design guides the exploration of humans' exchange and interaction of information, finds the best access to needed information from different ways, and balances the relationships between humans, humans and products, products and the environment, and humans, the environment and other subjects. As one design discipline with intense social applicability, it can reflect the outcomes of the development of information technologies and the trends of information usage. Science lays the cognitive foundation for its prompt development, arts serve as the emotional medium for its development, and economy is the basis of its activity. In the 21st century now, the more frequent type of Information Interaction Design that people come across is the ways for users to communicate and respond to information to establish the connection between the information recipient and the exterior environment.^[5] Consequently, Information Interaction Design itself is undergoing constant integration and rapid development. As one design discipline with intense social applicability, it can reflect the outcomes of the development of information technologies and the trends of information usage. During its rapid development, it can adapt to the ever-changing new design environment, and innovatively strengthen the communication between humans and the outside world.

3.2 Information Interaction Design in TikTok

Information Interaction Design is a new way of design to solve many information problems nowadays. It is an interdisciplinary research field across arts and information technology, and creates and communicates new information channels. Application of new media entails not only the communication of information but also the consideration of the relationship between information and its recipients. The information to communicate undergoes re-design, and presents itself in a new way by new interaction design, to the outcome that the information products offer humanized experience, prioritize the users, and enhance the recipient's experience of usage and interaction through proper application of technologies.

As a medium for information communication, TikTok offers new ways to be represented and perceived and numerous interaction experiences. Through its strengths, it shows us a new mode of information communication. It also boasts a new means of information communication including a new way of representation, perception and pluralistic interaction. Concerning interaction design, the user interface adopts user centered design, integrating ergonomics and sensory design, with an enhanced socializing circle and

natural instinctive experiences from sight, hearing to touch, all exhibiting a brand-new characteristic never seen before. Information Interaction Design plays a role, from overall to partial, in guiding the information communication of TikTok videos. For its overall design, TikTok videos provide information with more traceability. For its partial role, through Interaction Design and Sensory Design, TikTok videos provide information with more fun and effectiveness.

4. Status Quo and Characteristics of TikTok's Development under Information Interaction Design

4.1 Changes in Ways of Information Communication and Interaction

Over the years, the ways we communication and interact with information have changed and diversified due to the development of technologies. During the process of information communication, as humans' mindset and lifestyle keeps evolving, humans has learned to acquire information and exchange information with the society they are in from the point of the subject, based on which, they learned to handle, process, and control all sorts of information, and they eventually came to transform the society through information. From the previous single access to information to the current pluralized development of information, especially during the era of short videos, the communication layers of information media grew more diverse, from TikTok's early entertainment-oriented information to a current pluralized development in every industry and circle. From a perspective of design, as the application of information tools and information technologies such as the computer and the Internet becomes wider and wider, the scope and depth of the research on Information Interaction Design have been greatly enhanced. Information Interaction Design studies the communication between people and the society and the reception of the response of information, establishing the connection between humans and the outside world. As it reflects the trend of user centered design in the future, it is an important sub-field of the social research of information science. Marshall McLuhan pointed out that every emergence of media creates a new way of perceiving and understanding the world, consequently changing the relationships between humans and humans and the society.^[6] As science and technology evolve, the media for information communication undergo constant change, from an audial access, audial and visual, to a variety of information products with easy access to the needed information anytime anywhere, where each has its own content and language.

4.2 Status Quo of TikTok's Development under Information Interaction Design

As an information product which provides the public with information, TikTok has grown more and more popular among users. According to The 47th Statistical Report on China's Internet Development, up till 2020 December, all levels of Chinese governments' TikTok accounts for government affairs add up to a total of 26098.^[7] The information it provides constantly extends to new fields with increasing information formats. The rapid development of TikTok gave rise to more means of information communication, such as live streams for merchandise on TikTok, a combination of advertorial advertisement recommendations and information content, and setting up related merchandise windows. Gradually, the communication and interaction mode of information centering around short videos came into being, extending to the exploratory field which vertically enhances the content of information communication and interaction. TikTok is superior to other video communication forms, for as users watch all the short videos, they can quick-share, interact in real time, and share the must-views while communicating, with more interaction and diversity.

From the previous short and refined news feed of 15 seconds to 1 minute to the current 15-minute and longer one, TikTok videos' information content became more scattered and long. The change of the running time of the information content results from the development and change of the platform itself. The rapid growth of TikTok is based on its large supporter base, diversified product types and a satisfactory profiting mode. A 15-second video on TikTok allows the users to acquire more information and content in their fragmented time, but for the information content which requires a long running time, 15 seconds' time limits the expression to a certain degree. Opening up information content in long-form videos can strengthen the creators' content with more space to develop to a certain degree, providing opportunities for the commercialization of the industry and enhancing the quality of the information content of TikTok videos.

4.3 Characteristics of TikTok's Development under Information Interaction Design

4.3.1 Centralization Algorithm Recommendation

The essence of TikTok's algorithm is recommending suitable content to proper users. Due to its special algorithm recommendation mechanism, TikTok's content operation has been more than excellent. TikTok will establish a portrait for its users based its online activities and push contents accordingly to the users attributed with related labels. Such a recommendation mechanism caters to the users' needs for content and feeds their loyalty. Moreover, TikTok will collaborate with other media such as MGTV. The collaborations with tv and entertainment shows create specialized topics for the content, attracting followers of the related content to TikTok. The decentralization algorithm of TikTok mainly entails recommendation from the interest point of viewed video content and selective

dimension of content interest based on users' habit on the platform including likes, comments, favorites and shares, which pushes recommendations of content of related interest via users' interest points analyzed by the algorithm. The algorithm recommendations utilize users' behavior mode of first-chosen information content field, which leads to an anti-diversity of information and limitation of users' video types, consequently causing monotonous repetition and aesthetical fatigue.

4.3.2 Immersive Experience

During the design of settings, we came in touch with a fairly large number of videos which popped up from the menu box after completion of videos, allowing users to execute the selective action at the next step. TikTok fully takes into consideration the characteristics of the short video market in compliance with the fast consumption of short videos. As regards users' experience emotions, the AutoPlay mode of short videos adopts the Zeigarnik Effect in psychology, that people have the instinctive drive to finish tasks, and are more impressed with the problems to be solved than with those already solved. This mechanism turns short videos into a way of entertainment and a tool of socialization. Such settings of TikTok with unforeseen content and its theme raise the curiosity of users for the unknown videos, bringing them into the immersive mode. Through short videos, we can see the miniature of real life. TikTok allows you to experience a different life, a different colorful world, and different psychological journey from every one in a very short time. For TikTok's short video products, users' sense of experience mainly relies on the strength of visual and audial impact. The majority of many mobile short videos runs the length of 15 seconds with only instant highlights most of the time. From a point of view of playback visuals, TikTok is now adopting an operation design of de-popover, where we conduct interaction activities such as commenting on, liking, or sharing the video while watching. They are all temporary popover design, adding the extra immersive and non-blocking interaction and ensuring the playback of the current video content on loop during the interactions, which better enhances people's cognition and understanding of the video content, and raises their willingness to interact with us. The reason why users choose to watch TikTok and become obsessed is that every TikTok video's content attracts users, and especially that when they use TikTok, they are subject to a multi-sensory experience due to the Information Interaction Design. The visual stimuli will make people feel joy and excitement, and audial stimuli can help people make the right response to things so as to raise the cognitive efficiency. When the eyes are off the screen, the hearing system can also bring our attention. This kind of multi-dimensional user experience render the users addicted.

5. Analysis of Information Design and Interaction Design in TikTok

5.1 Analysis of Information Design in TikTok

The development of information technologies has changed drastically our ways of information communication. Nowadays, information is no longer limited in static modes such as written words or pictures, but rather in a dynamic visual-audial mode. During this process, the selection of the ways of information communication became more important for the subject of information publication. As a new communication channel, TikTok has become one of the trends of the development of information communication media during the new era. Taking the commentary videos as an example, the publisher will divide a long film or a series of TV or animated show into three parts, each of which will be re-edited with the addition of video sound effects and adequate commentaries, allowing quickly catching up with the plot. The thinking pattern of the information communication of TikTok is translation, receiving and responding to information to be relayed for the second time.

5.2 Analysis of Interaction Design in TikTok

Interaction Design is a design discipline in humanities, and with the main goal to respond to users' needs, it encourages and assists in the accomplishment of more meaningful and efficient interaction among users. Regarding interaction designers, they must possess a multi-discipline academic background and the horizons and design professionalism of a comprehensive command of the knowledge, and need to understand computer technologies, system operation, user characteristics and the ongoing tasks, as well as an overall command of users and the comprehensive factors relating to the tasks. The essence of Interaction Design is to make the operations easy to the users with a sense of high satisfaction. The Interaction Design in TikTok focuses on simple and easy operations, reducing users' costs and shortening the process. TikTok's Interaction Design gains more favor from the users to some degree.

5.2.1 Interaction Design of Hand Gestures

The swipe-left gesture on TikTok leads to the publisher's personal page. Our order of operation prefers the use order of from left to right. On TikTok, the like, comment and share are placed vertically in order on the right of the video content that we are watching, in line with the operating habits and our visual norms. TikTok's function icons are designed to be on the right side where our right hands can easily access and the frequently-used thumbs can easily touch, elevating users' sense of usage without them realizing so.

From the perspective of interaction, hand gestures are actually the input mode, which denotes the way humans and the machine

interact with each other. The interaction design session of mobile products is based on hand gesture interaction. The main gestures for interaction are: to click, press, swipe, scroll and zoom. TikTok's interaction design mainly includes to swipe and click. Such hand gesture design meets the characteristic of easy operation for the interface of smart phones in China. With high efficiency and simple design of the interface interaction, users don't need to waste extra time on operation time and steps. After entering the home page on TikTok, no extra operation is needed from users with the whole content of short videos filling the screen. If you want to watch the following content videos, a simple swipe-up gesture will suffice, without disturbing other users' viewing experience of this short video, which is confirmed while using TikTok. When watching the video content, if the users relate to it, they don't have to go to the like on the menu bar; instead, they can double-click or non-stop click the screen to like the content. The feature of double-clicking to like of TikTok enhances the fun of users' interaction. The fluid location of the liking function allows TikTok to set up the mode of sustained departure, where liking the video while watching is always voluntary and interacting with little hearts launched to fill the screen elevate our sense of interaction and enhance the interaction efficiency from both the tactile and visual aspects.

5.2.2 Guided Interaction Design

Concerning Internet products, guided interaction design is suitable for beginners of this type of products, quickly guiding the new users to understand and learn how to use the products during operation and usage. It can be classified into six models: popover, slide, mask, embedded and the combination of interactive and poly-media guides. The popover guides are the most common of all, widely applied in all sorts of short video platform, such as TikTok and Kwai. TikTok's preferred adoption of popover guides results in a minimal disturbance of the users while they are operating in the immersive experience. The adoption mechanism of popover guides during the editing and production of TikTok videos is demonstrated by analyzing the differences between the popover guides and the traditional page layout as well as the advantages of popover guides. When beginners start to record a TikTok video for the first time, a scanning guide will pop up to one-minute playback of the home page with simple and clear popover guides, which are mainly texts with simple instructive patterns to guide the users in navigating the content

6. Conclusion

As Professor Li Yanzu mentioned in Art & Design, "Design began to shift from the tangible to the intangible, from objects to non-objects: from a culture of technologies focusing on form and function to a culture of humanities of the intangible and pluralized reproduction. The appreciation in culture creates the bonus value of the products. Design is also called the force that drives cultural development." TikTok is one of the ways of information communication during the new era, its core element being communication of information to the users via video content information. As the product of the information age in China, TikTok is the information product aimed at information communication, bringing information to us with its unique characteristics in the current society of the explosive development of information. As of now, TikTok is still undergoing development, and is required to adjust their pace of the era and design based on the user characteristics. As the video form of information content communication has taken the lead in development in the present day of deep integration of multiple media. The future direction of TikTok's development should leans towards further exploring the Content plus Operation mode, deploying the advantages of main-stream media and the TikTok platform, increasing the communication value of the information content. The analysis of TikTok's development status quo from the perspective of its own characteristics and prospect of future trends provide some reference for the further development of other short video platforms.

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