

Analysis of the Changing Population of Bilibili Users

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Abstract. Bilibili, as a community site for the younger generation, not only covers a wide variety of videos but also gives a platform for friendly interaction between viewers and creators. However, through its business strategy, Bilibili has also changed from a core ACG subculture video website to a pan-ACG website. Using both case study and literature analysis methods, this paper analyses the reasons for the change in users through three components: social cognitive theory, Maslow's hierarchy of needs theory and social identity theory. From these three theories, it can be learned that changes in users can be caused by different reasons, which can be mainly divided into personal and environmental factors. Some very subjective reasons, such as growth, interests, needs, and so on, cause individuals to leave the platform or choose other forms of entertainment. In terms of the site itself, the weakening of the community atmosphere and the extension of the content section may lead to a change in the type of user. It also gives suggestions based on the relevant findings as well as giving the shortcomings of this paper.

Keywords: social media; users change; User Generated Content (UGC) sites.

1. Introduction

With the development of technology, social media has a variety of features. Some video platforms tend to provide sufficient sources of entertainment for meeting the demand of users, such as Mango TV, Tencent video, Youku and IQIYI. Unlike other social media, Bilibili relies on certain subcultures to create a community atmosphere. Therefore, more and more group members choose to use this platform. Bilibili transformed from a core ACG subculture video website to a pan-ACG website, with many important events, such as the New Year's Eve festival, Bilibili microlink, the listing of NAKDAS and so on. An increasing number of people enjoy recommending this tiny website, so people who have other demands also were appealed to there. The barriers-breaking behavior is also available to increase user viscosity and expand the user group. In the process of breaking the barriers, the type of users also changed accordingly. These changes also led to some other problems, including the quality of danmu decreased, the community atmosphere weakened, and new content and new partitions joined. There are many reasons for these problems, such as user growth, product transformation, marketing strategy, etc. This paper analyzes the reasons for the change in the Bilibili user population from three perspectives: social cognitive theory, Maslow's hierarchy of needs theory and social identity theory. Through this study, one can deeply understand the reasons for the change in the users of the B site. From the perspective of the video up-loaders, one can decide the orientation of the type of their videos based on the analysis of the users of the B site. From the point of view of Bilibili, the users are one of the most important components of the website, the company can better adjust the strategies used currently by analyzing the change of the users, and making innovations to meet the current situation Innovation.

2. Introduction of Bilibili

Bilibili is a highly focused cultural community and video platform for the younger generation in China. Bilibili is an ACG (animation, comics, games) content creation and sharing video site in its early days. Starting from an ACG community site, early users were focused on games and ACG subcultures. It mainly provides the latest popular Japanese animation, original music and dance videos by up-loaders. Since April 2016, highlighting the feature of danmu and differentiating it from other video software, Bilibili revamped the video partition and added separate popular rankings. Meanwhile,

businesses, according to a variety of needs, started to explore the commercialization of games, animation rights, live streaming, e-commerce, and e-sports. Post-2018 IPO financing has enabled the company to broaden its footprint with appropriate cooperation resources in the aforementioned areas, thus building a more quality Z-generation living community. After more than a decade of development, Bilibili has become a diverse cultural online community with over 7,000 interest circles and a constant flow of high-quality content around subscribers and uploaders. The site has been the No. 1 on QuestMobile Research Institute's "Gen Z Preferred App" and "Gen Z Preferred Pan-Entertainment App" lists and was selected as one of the Top 100 Most Valuable Chinese Brands in the 2019 "BrandZ" report.

3. Bilibili User Population Change and Analysis

3.1 Description of User Population Changes

During its start-up period, Bilibili was a pure niche ACG community, so users gathered in first and second-class cities and had a great understanding and love for ACG culture. As the number of users and creators continued to increase, the variety of videos grew and the content of Bilibili changed. Through social analysis, it was found that the themes of video partitions in Bilibili are clear, but the interaction between each core user is relatively distant [1]. After the "barriers-breaking" behavior, statistics show that the average age of new users is around 20 years old, of which more than 50% are from third-tier and lower-tier cities, and nearly 82% of Bilibili users are Generation Z users, referring to the first group of people with easy access to Internet technology, who benefited from the Internet revolution that occurred throughout the 1990s. Thanks to the Internet revolution that occurred throughout the 1990s, Generation Z users grew up with unprecedented access to a wide range of technologies [2]. The main users of Bilibili at this stage are Generation Z in first and second-class cities, most of whom are high school and college students, and its future user growth path is to spread to Generation Z in lower-tier cities and to a wider age group in higher-level cities [3]. Along with the growth of time, Bilibili's core user graph spans from young people full of creativity and vitality to the new middle-aged with greater consumption demands and stronger spending power.

3.2 Analysis

3.2.1 Social Cognitive Theory

According to Bandura, the social cognitive theory is a theory that considers the human activity to be determined by the interaction of three factors: individual cognition, individual behaviour and environmental factors. In China, young people born between 1990 and 2009 are known as Generation Z. Generation Z is the aborigine of the Internet, those who have frequent access to Internet technology since birth and have a natural dependence on and control over the Internet. The first users of Bilibili are concentrated in China's more developed cities, such as Shanghai, Guangzhou, Shenzhen, etc. This is because of the rich resources and well-developed education system in these areas, compared to counties and less developed regions, where families are more enlightened and affluent, enabling the young generation in big cities to use and explore the Internet at an early stage. Generation Z from middle-income and above families are more inclined to use social media as a sociability tool than Generation Z from low-income households [4]. With the commercial expansion of Bilibili and the continuous expansion of product content, the type of users is changing in a subtle way. The first law of imitation is the law of decline, which means that people from the lower social strata have the tendency to imitate people from the upper social strata. Young people in third-tier cities will imitate the consumption habits and lifestyles of young people in primary and secondary cities. On the other hand, according to the second law of imitation, in the absence of interference, once imitation begins, it grows geometrically and spreads rapidly. It can be seen that the increasing number of users of Bilibili is related to this. As the number of users grows, the demand for website features and the variety of videos also rises, and companies modify the website to meet the needs of users. As a result,

the site has added sections to meet the needs of a wide variety of people, thus increasing the frequency of use to increase user viscosity. Teenagers are able to get pleasure and satisfaction from the videos uploaded by the uploaders, which enhances their sense of identification with the site and makes them voluntary users of the site.

The social learning theory of Bandura emphasizes observational learning or imitation learning, which is a process where individuals learn indirectly by observing the behavior of others and the consequences of their behavior. Bilibili has many video creators to share their experiences and lives, and these uploaders do not need to consider age or gender. As long as the videos meet the norms, they can be seen by all. For Gen Z users who have a strong desire to socialize and are also familiar with technology, Bilibili provides a ripe ground for creativity and communication. Some teenagers, who may not produce videos because they are shy and lack relevant equipment and experience, can export their values and communicate deeply through pop-ups and comments. By communicating with netizens, they expand their own views on issues and through feedback from others, they constantly modify and refine their responses, and thus continue to develop their own cognitive structure.

Moreover, children in the Z-era are deeply connected to social media, which allows parents to actively participate in the lives of their teenagers [5]. The excellent content produced by Bilibili's creators is covered by mainstream media, which represents a certain level of authority, reliability, and learnability, and is watched mainly by the middle-aged generation, especially parents with children or grandparents. When elders see this information, they tend to assume that the author of the video is highly educated and moral because of the authoritative media, even though they do not know the person in question, and thus can serve as a role model. As a result, parents who need to find better role models to teach or guide their children may choose to use the behavioral norms of some of the uploaders in Bilibili as examples. And these uploaders are familiar to the deep users of Bilibili, and are even idols or learning targets for teenagers, which means that when parents use them as examples, children are less likely to be rebellious and easily follow their parents' advice. A better result is that the adolescent is praised for his or her idol, which acts as a substitute reinforcement, whereby he or she feels encouraged to do the same and thus begins to correct his or her behavior. On the other hand, parents spend more time with their children and because of their status and moral requirements that regulate them to rectify some of their children's incorrect behaviors, but due to incorrect communication styles or generation gap, the communication between the two generations is poor and prone to conflicts. Through mainstream media coverage, elders can further understand their needs and fulfill their needs through this social media that young people are using, and therefore become Bilibili users.

3.2.2 Maslow's Hierarchy of Needs Theory

In Maslow's view, there are two different types of needs in the human value system. One is the instinct or impulse that gradually becomes diminished up the biological spectrum, called deficit or deficiency need; the other is the potential or need that gradually emerges with biological evolution, called higher need or growth need. The most urgent needs are the main reason and motivation for human action, and human needs are gradually transformed from external satisfaction to internal satisfaction. As time progresses, the first batch of Bilibili users entered adulthood and a new stage of life. At a young age, people do not need to worry about their low-level needs and physiological needs, such as food, clothing, housing and transportation. This is because children do not have the capacity and time to afford it yet, and their caretakers will take up this part of the responsibility. As adolescents enter adulthood, they need to live independently from their parents, which makes them need to have the ability to maintain their basic needs first. In addition, people need to devote more energy to other aspects of their lives that can sustain them. This is especially true for workers, who need to maintain a balance between family and work. In China, most people think that having a family and children is one of the most important things in life. A family means a stable job, a house of one's own, and enough money to avoid potential problems, just like the need for security in Maslow's theory of needs. What's worse, these things need to be done at the same time, and they have to give up their previous hobbies to carry out some of these projects. Instead, in their limited free time, employees or parents

choose some video forms that can make them constantly happy to make them relax physically and mentally, such as short videos of about 0~4 min, short videos are rich in content and fascinating. It abandons the unique form and logic of traditional videos in the past and presents simple and interesting features to the audience [6]. While more videos of Bilibili are in the long video type, which does not meet the needs of some people, so this part of the users will choose to leave Bilibili and choose other social media.

When people's lower-level needs are largely satisfied, their dominance is no longer maintained and higher-level needs take over as the main reason known as driving behaviours. Bilibili has a large number of uploaders who share their stories and lessons to give people a better understanding of something, whether it is theoretical knowledge, skills, work, or emotions. People learn all sorts of things through the videos uploaded by these uploaders, to fill in gaps, to gain experience, to avoid work and study problems, to develop problem-solving, critical thinking and other skills, and so on. Although official figures show that Bilibili's users are in their 20s and 30s, the need for self-actualization is not limited to this age group, which gives the site a deeper and broader demographic.

3.2.3 Social identity theory

Social identity theory places the identification of individuals with their group at its core; individuals identify with their group through social categorization and develop in-group preferences and out-group biases. Individuals increase self-esteem by achieving or maintaining a positive social identity, and positive self-esteem derives from favorable comparisons between in-groups and relevant out-groups. Bilibili, as a pre-ACG-focused website, has developed a unique bulletin culture because of its bulletin mechanism, which means that user discussion and participation are greatly enhanced, and community interaction is positively correlated with user participation. This means that user discussion and engagement are greatly enhanced, and community interaction is positively correlated with user engagement, with user participation significantly increasing perceived customer value and user viscosity [7]. With the rise of the internet, more and more people are using computers as a means of entertainment. With the expansion of channels such as posting, QQ and WeChat, Bilibili, a website that gathers many ACG resources, has been promoted to the appropriate demographic, gradually forming a unique community atmosphere. Bilibili's core products meet users' needs for video diversity and a harmonious and friendly discussion atmosphere. In practice, users can find parts of the diverse videos that meet their needs and gain an appropriate sense of belonging in a community-style discussion atmosphere [8]. Unlike other video sites, those that most internet users tend to use as a resource platform, internet users can find videos of their own genre. Bilibili is more of a community where updates of Japanese anime, manga, and advice are accompanied by a danmu culture. A group of people with the same hobby will gather underneath the video of Bilibili to cheer and discuss together. Individuals continue to use SNSs because they derive satisfaction and a sense of belonging from the experience [9]. Members who share the same interests and values are driven by the discourse within the circle to further strengthen their group adhesion and continue to consolidate the boundaries of the circle.

In 2015 Chen Rui officially joined the company as chairman, and Bilibili successively launched live streaming, advertising, game agency, e-commerce and other businesses. In the days that followed, Bilibili's increase in new video partitions became faster, and the proportion of non-ACG content gradually increased. Bilibili's development mindset also gradually became apparent, moving from the niche ACG group to the entire younger demographic. However, with more mainstream values and more users, it is like a county town whose culture and atmosphere have been destroyed by the intrusion of foreigners, and the local population is naturally discontent. Group norms have a strong influence on social identity. Social identity refers to their own sense of who they are and how they relate to others usually in relation to the way they view other individuals and groups around them [10]. In the early stages, ACG users have been filtered to form a small circle, have their own culture, identify and follow the rules accordingly. In the process of breaking the circle, however, a large number of people from outside the circle come in. This group of people may belong to a certain circle, but do not understand or abide by the rules in the ACG circle, and can therefore disrupt the relatively

harmonious culture. The main factors in the willingness of online community users to participate are identity and conformity, rather than obedience [10]. Due to the weakening of the community atmosphere, the sense of identity of community users slowly diminishes or even disappears in it, and after it has disappeared, community users lose interest and leave.

4. Conclusion

From the three theories, it can be learned that users' changes can be caused by different reasons, which can mostly be divided into personal and environmental factors. As a website, Bilibili can give users a certain amount of choice and meet their needs, which fits the reasons why most people can choose the site. Due to its unique community atmosphere, it had a large number of users who were loyal to a certain circle culture in the early days. However, the expansion of the business and the extension of the content section has led to a change in the type of users.

But there are also some problems that have been revealed. Bilibili's inability to handle the relationship between old and new users has led to a risk of weakening the community atmosphere and affecting long-term user retention, resulting in a situation where users cannot be retained. It is hoped that Bilibili will expand its content boundaries in the future while not forgetting to protect the experience of existing users.

This paper only uses secondary data from the Internet to conduct a case study and does not go further to construct a data model to analyze the phenomenon, so there may be some inaccuracies. In the future, people can collect more detailed data over a longer period of time to reveal changes in video platform users through mathematical models and draw more accurate conclusions.

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