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Fifteen Seconds of Fame: A Qualitative Study of Douyin, a Short Video Sharing Mobile Application in China

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Abstract. The proliferation of short video sharing mobile applications like Douyin and Kuaishou in China has led to new forms of entertainment and information sharing practices. Even the huge live streaming industry in China has been influenced by these popular video sharing mobile applications, because some people are drawn away from watching live streams to watching short videos. However, little research has looked into why and how people use Douyin, what engages users, and what concerns and negative experiences users have with Douyin. Through interviews with 28 regular Douyin users, we identify several unique motivations of using Douyin compared to other social media, reveal several different categories of content that engaged them, and present several challenges and concerns they have when using Douyin. We show that people use Douyin not only for entertainment, but also for keeping up with "fashion" and for informational and practical needs. We situate our findings with prior research on social media use in China, and provide design implications for future video-based social media.

Keywords: Short video sharing, Uses and gratifications, User engagement, Social computing, Online community

1 Introduction

Douyin (抖音, or Tik Tok, for its international version) is a short video and music video sharing mobile application that was launched in autumn 2016. It allows users to produce and browse quick-fire video clips lasting from 15 seconds to one minute, to share funny and even nonsense videos widely online, similar to how Vine [2] was used. With over 500 million global monthly active users [1] and over 250 million daily active users in China [21], Douyin (Tik Tok) has been the most downloaded non-game app of iOS App Store globally since the first quarter of 2018 [16]. Douyin's influence has even extended offline, as many users identify themselves as 'Douyiner' ("抖音人") and socialize with each other using

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jargons in real life. Many songs have garnered tractions because many content creators on Douyin used them as background music of their videos.

One of the key differences between Douyin and Vine is its editing functions, which allow the users to have add-ons, stickers, special visual effects, and animations easily when they are creating videos. Douyin also emphasizes the role of music in the creation of videos, allowing users to easily align special visual effects of videos to the chosen music. Besides, it adopts recommendation algorithms to customize what is shown to different users when they are browsing videos. These features enable end users to easily produce short videos that are of high production values, and enable viewers to freely explore many videos of interest. These features could also indicate a new genre of affordances in video-based social media, especially those built around video sharing (Vine, Instagram, and YouTube), though little work has been done to explore and understand the motivations, practices, challenges, and opportunities of this emerging style of short video watching and sharing.

This paper aims to answer these questions by an interview-based study with active Douyin users. We use uses and gratifications as a lens to explore motivations, user engagement, and potential challenges and concerns of using short video sharing social platforms, relate our results to prior research in video interaction and video sharing platforms, live streaming, and social computing theories, and discuss its design and social implications from our investigation in the situated cultural context of China.



Fig. 1. User Interface of Douyin (Tik Tok). Left: a video showing a dynamic wallpaper for mobile phones. Right: a video showing a love letter with narrations

2 Background and Related Work

There are many online platforms and communities which support video sharing. YouTube is the largest platform for sharing video content online. It does not have constraints on topics or time limits, and hosts billions of public accessible archived videos. Vine was a public short video sharing platform operated by Twitter but shut down in 2017, which had a 6-second time limit for videos. Instagram, now owned by Facebook, began as a photo-sharing platform, but has recently started to support videos of 3 to 15 seconds. While all of these platforms are popular, Douyin has some unique features, such as emphasizing on background music and special visual effects, and the aforementioned platforms are currently not available to Chinese users. We chose to focus on Douyin to understand the specific uses and gratifications of short video sharing platforms, and to investigate the affordances of such platforms in the unique social media landscapes and social contexts of China.

Prior work has investigated public video sharing platforms such as YouTube, Vine, and Snapchat. For example, a survey of online videos conducted by Pew Research in 2013 found that 18% of adult users produce videos and share them online [10]. The survey also found that adult content producers mostly post videos of family and friends doing everyday things (58 % of the content producers), themselves or other people behaving in funny ways (56 %), and events they attend (54 %). Ding et al. examined Youtube authorship through measuring and analyzing video uploaders of YouTube, and found that 63 % of the most popular uploaders were mostly sharing user-copied (rather than original) video content [5]. Farnham et al. found that people maintain faceted lives in online spaces, choosing presentation of their identity based on the affordances and constraints of various social technologies [6]. Yarosh et al. studied youth video authorship on YouTube and Vine, and found that youth authors treat online video sharing platforms as a stage to perform, tell stories, and express their opinions and identities in a performative way [24]. McRoberts et al. studied how Snapchat users perceive and use the Stories feature, and relate their findings to theories of self-presentation and identity curation in social media [15]. Cavalcanti conducted an interview-based study to understand the affordances of ephemeral communications of Snapchat, and found that Snapchat users experienced media, meaning, and context loss, and they developed workarounds to deal with these losses through preemptive action and collaborative saving [3]. Though relevant, Douyin has several unique design features and different demographics of users, and it should be an important part of research agenda for understanding video interaction, similar to Vine [9]. Douyin also supports in-app live streaming functionality with gamification elements which allows viewers to send virtual gifts to their favorite content providers, and we will situate our results with prior work on live streaming of video gaming [18], information behavior on social live streaming services [18], mobile live streaming [20], live streaming in China [11, 13, 14], and gamification in live streaming [17]. To the best of our knowledge, this paper is one of the first to examine the uses and gratifications of short video sharing practices on Douyin.

3 Method

Inspired by the popularity and impact of Douyin, our study is motivated by the following research questions:

RQ1: Why are people using Douyin and how are they using it?

RQ2: What engage the users when watching the videos shared on Douyin?

RQ3: What are concerns, challenges and negative experiences using Douyin?

3.1 Interviews and Participants

To address these questions, we conducted 28 semi-structured interviews with active Douyin users in China, 5 of whom were also active content creators (Table 1). Our participants were 50% female, aging 16-31 ($M = 23$, $SD = 4$). They were recruited through snowball sampling, and were mostly located in Beijing, Shanghai, and Yinchuan. The interviews were conducted remotely using video or audio calls from October 2018 to January 2019. Each interview lasted approximately 40 minutes, and participants were volunteers who did not receive any honorarium. Interviews included questions about their motivations to watch short videos on Douyin, what types of content they enjoyed watching on Douyin, what they liked or disliked about using Douyin, how they interacted with other users on Douyin, and concerns and negative experiences they had with Douyin. During the interviews, participants were also asked to share with us some video clips they recently saw and thought as engaging or interesting, and we asked them to elaborate on why they enjoyed watching the videos. Interviews were conducted in Mandarin, audio-taped, and transcribed by the author who conducted the interviews.

3.2 Data Analysis

The transcripts of all the interviews were analyzed using an open coding methods [4]. The authors who are both native Mandarin speakers first coded the transcripts individually, and met to gain consensus on the codes. Then the authors discussed about the codes using affinity diagramming as a modified version of grounded theory analysis, to find and group the themes that emerged.

4 Findings

Our analysis revealed several different user motivations of using Douyin, users' practices of using Douyin, what content engaged users, and negative experiences, concerns, and challenges of using Douyin.

4.1 User Motivations

For Entertainment and Sociality. All of the interviewees reported that they watch videos on Douyin to relax and have fun. Killing time, making more friends

Table 1. Summary of Douyin users interviewed. P8, P9, P16, P22, P26 were also active content creators.

ID	Sex	Age	Location	Occupation	Months using Douyin	ID	Sex	Age	Location	Occupation	Months using Douyin
P1	M	19	Yinchuan	Student	10	P15	F	27	Beijing	Manager	6
P2	M	21	Yinchuan	Student	15	P16	M	26	Shanghai	Programmer	15
P3	F	17	Yinchuan	Student	12	P17	M	19	Beijing	Student	9
P4	M	23	Beijing	Student	18	P18	F	20	Yinchuan	Student	16
P5	F	22	Beijing	Office worker	11	P19	M	21	Beijing	Student	15
P6	F	16	Yinchuan	Student	8	P20	F	24	Yinchuan	Accountant	13
P7	M	24	Shanghai	Programmer	20	P21	F	23	Shanghai	Student	5
P8	F	25	Beijing	Doctor	10	P22	M	31	Shanghai	Programmer	18
P9	M	21	Shanghai	Student	24	P23	M	22	Beijing	Student	15
P10	M	26	Beijing	Programmer	8	P24	F	25	Yinchuan	Student	10
P11	F	23	Shanghai	Accountant	6	P25	M	29	Yinchuan	Manager	8
P12	M	18	Yinchuan	Student	11	P26	F	27	Yinchuan	Office worker	15
P13	F	24	Yinchuan	Student	16	P27	F	26	Beijing	Programmer	12
P14	F	22	Beijing	Office worker	10	P28	M	18	Shanghai	Student	6

from strangers online, communicating with others and sharing personal life stories, sharing their point of view, and finding an appropriate community were also reported as important motivations for using Douyin. These motivations align with findings about live streaming practices in China [14], which may explain why Douyin is influencing the popularity of live streaming services in China – people use both Douyin and live streaming for entertainment and sociality, and the two types of media certainly compete for time.

“A fashionable lifestyle”. We found that 21 interviewees use Douyin for following the perceived stylish and up-to-date lifestyle, because they consider using Douyin as “a fashionable lifestyle”. Further, 16 interviewees reported that they used Douyin to be able to talk with people around them with interesting and trending topics, because peer students or workers often talk about content on Douyin. This is especially true for young Douyin users. As noted by P3, a female high school student:

“Over 90 per cent of students in my class are using Douyin. We often talk about interesting videos we saw on Douyin and even produce funny videos together. They often share the information of some fancy items they get to know about from some videos on Douyin, like some cute bags or nice cosmetics, and even buy them on the Internet once they become super popular. That seems cool for most of us. I cannot imagine what it will be like if I do not use Douyin. It would be like an outlier, I guess, that I could not understand what others are happily talking about. I use Douyin to keep up with the trend in my class.”

We also found that, especially for young Douyin users (those under 20 years old), their attitudes toward those who do not use Douyin aligned with Social Identity Theory [19] that they will discriminate those who were not using Douyin. They thought non-Douyin users were “*uncool and outdated*”, and tend to socialize less with such people in real life. Two interviewees (P6 and P28) even mentioned that they did not usually use it when they were alone, because they wanted to focus on study or their hobbies in their own time, but would use Douyin when they were together with close friends who enjoyed using Douyin, because they wanted to present themselves as “*being up-to-date and knowledgeable*” about using Douyin to their peers. The fear of being discriminated by peers is another reason driving the use, which adds to the motivations of using Douyin for most of the young interviewees.

Engaging in a virtual intimate relationship. Our interviewees also reported that they used Douyin to feel as if in a virtual “intimate” relationship with their favorite content providers, especially with those who often post videos of them narrating lover’s prattle to their fans (Figure 1). They enjoyed hearing these prattles and imagined being in a pleasant virtual relationship without having to be heavily committed to it. They also learn from such prattles and use them in their real life for romantic relationship, as noted by P6, a female high schooler:

“I really enjoy watching this Douyiner. His voice is nice, and he always posts videos in which he is narrating beautiful prattles to us. I feel as if I am in love with him. And the background musics he uses are great, too. I will listen to them again and again. I also share some prattles he wrote with my close friends, and we take notes about these prattles. I think we can use them to our beloved ones one day. ”

This reflects a pattern of para-social interaction [8] that fans extend their emotional energy, interest and time to their favorite content providers on Douyin, while content providers may not respond to the devoted energy and interest directly. However, as the content providers on Douyin constantly post new short videos which may partly respond to each fan’s voice, the emotional needs of fans may be satisfied and they in turn pay more attention to the content of their favorite content providers.

Informational and Practical Purposes Interviewees also reported that they enjoyed watching short videos that have practical values to them in real life. Videos related to work and study were most liked, such as sharing learning notes, dealing with *guanxi* (the ties between people fostered through exchanges of social capitals [23]) , and self-improvement tips. For example, P3 noted:

I like watching other students sharing their learning notes about Maths on Douyin. Some notes are really of high quality and easy to understand, because they know what we as students are confused about. I watch them to learn how I can improve my note-taking skills.

Interestingly, several young users reported that they like watching and sharing videos in which the creator is sharing good-looking profile images for them to adopt for their social accounts, fancy nicknames for online social accounts, and creative animated mobile phone wallpapers for individuals or couples (Figure 1). This shows a trend that the content of some short videos can be easily “materialized” and adopted in other social channels, and the videos penetrate into users’ real life. As noted by P28, a male student who was in a relationship:

“My girlfriend really likes to adopt the profile images recommended by a content provider as her WeChat account. She says that those profile images are beautiful and can fit with her personality well. She also likes to adopt animated mobile phone wallpapers shared on Douyin. Sometimes those wallpapers are for a couple, which are very creative in that two phones can create a holistic story when put together, and she always urges me to adopt those wallpapers together with her. It is a way to show to her friends that we are in a sweet relationship. ”

4.2 Categories of Engaging Content

We found several different categories of content that users are engaged in. Due to the limitations of the qualitative studies, the results we report here are not intended to provide a representative sample of content that is perceived engaging, but to highlight the unique genres that were not usually presented in prior research. We intentionally leave out some common genres of videos that were intensively studied and reported in prior research, such as movie clip remix, selfie style videos, creative dance, important life moment, etc, which are often reported in prior research [15, 24].

Positive Energy (正能量). Twenty two interviewees mentioned that they enjoyed watching short videos that show positive emotions or prosocial behaviors, for example, showing kindness to homeless people or strangers who need help, donating money to those in need, showing the efforts of soldiers when they are training, etc. Several interviewees noted that such content is well curated, and make them feel confident about humankind and humanity, e.g., as noted by P11,

“I think there should be more content about positive energy on Douyin. I remember one video which the content provider performed singing on the street to raise money for one of his classmate who got cancer. I was so touched about this video and even donated some money to him. ”

Knowledge Sharing. All the interviewees reported some content that was intended for sharing knowledge from the content providers. Such knowledge was often shared in a comprehensive way, with each short video only covering one or two key points of certain knowledge. Animation or slide style presentation were usually adopted by the content providers, with their narrations aligned with

closed captions of the video. The types of knowledge shared via short creative videos on Douyin covered a wide range, and the commonly mentioned topics included:

Popular science: Popular natural science (physics, chemistry, biology, etc.), popular social science (history, geography, etc.), health, safety, law, etc.

Education: K12 education, undergraduate education (e.g., Spoken English, learning tips, etc.), graduate education (e.g., how to prepare for Chinese Graduate School Entrance Exam), etc. Such content is more of interest to students.

Arts and skills: Singing, calligraphy, dancing, handicraft, painting, photography, etc. Our interviewees enjoyed the high production value and the creative stories that showcased the arts and skills in a comprehensive and attractive way. Some interviewees also noted that some videos stimulate their interest in arts and encouraged them to practise or learn more about certain skills. Some arts and crafts related videos were actually about intangible cultural heritage in China, for example, Chinese calligraphy, Peking Opera, Shadow Play, Dough Figurines, etc., which were mostly used for promoting traditional cultural practices by these cultural practitioners. Apart from short creative videos, livestreams were also adopted by these content providers for engaging more viewers with cultural practices, as previously studied by Lu et al. [12].

Profession related: Self improvement, professional skills, social skills, investment, etc. Our interviewees noted that a lot of such content was rarely seen in books or on other websites, and that “it is better conveyed through videos than words alone”. Such content was especially perceived useful by interviewees who were working. Videos about social skills, or even office politics, were especially mentioned by several interviewees, and they noted that such videos were very useful for Chinese society, where *guanxi* played an essential role in social and professional life [23].

Life hacks: Life tips, cooking, body building, makeup, pets, home decoration, gardening, etc. Such content was often mentioned by young adults (e.g., P5, P20) who just graduated from universities and started their careers, and began to live in apartment and equip their own ‘home’. Such young adults could benefit from the life hacks shared in these videos, which helped them improve their quality of life without having to do extensive searching on the Internet or bothering older people who had more experience for advice.

Baby related: Baby raising, early education, parenting, etc. The educational baby-related videos were more attractive for those who were raising or expecting babies, while other baby-related videos, which were about showing off how talented the babies were, or what fun it was to have a baby do creative things, were attractive for most people.

It is interesting that interviewees noted that they typically did not search for specific information actively when using Douyin. Instead, most of the time, they watched such informative videos because these videos were ‘pushed’ to them by the recommendation algorithms of Douyin. This differs from watching informative videos on YouTube, where most people seek information actively. Such ‘effortless’ encountering with educational videos made watching knowledge

sharing short videos attractive and engaging for Douyin users. As noted by P22, a male software engineer in Shanghai, who used Douyin mostly for watching beautiful girls dancing or creative content.

“I enjoy watching knowledge sharing videos because although I do not use Douyin directly for acquiring knowledge, but more for killing time, I can still gain some useful and practical knowledge from those knowledge sharing videos recommended to me, so that I won’t feel too guilty. For example, I learnt from Douyin how to make Douyin meal (抖音饭), which is super easy for us office workers to cook for dinner.”

Traveling and Tourism . Our interviewees also noted that they saw many videos that were about traveling to places of interest. Many cities, not only in China, but also all over the world, were covered by such creative videos, and typically they were not like official promo videos of a city, but rather, more like a well-produced video clips of representative views of the city. Asian cities outside of China were mentioned more than cities in America, Europe, or other continents, but it might be due to few content providers had access to those cities outside of Asia. Several interviewees noted that watching such videos can inspire them of potential travel destinations in the future.

Several young interviewees also mentioned some videos that were about traveling, but shot in a way as telling a story of how the content providers finally made up their minds to quit their jobs and planned a trip with a limited budget to a foreign place of interest. These interviewees noted that such videos inspired them of alternative lifestyles, that could relieve themselves from the chore of their family and social life to pursue their “dreamed” life. As noted by P24:

“After watching these people who give up something, like their jobs, in real life, for a trip to their dreamed places, I really admire them and begin to think about how should I pursue my dream in a more practical and meaningful way. Their story reminds me that I am still young, and I should try to pursue my dream even with limited resources.”

The effects of music . All the interviewees mentioned that the background music of videos played a great role in their engagement with Douyin. They really enjoyed some well-produced original pieces of music that were adopted by many popular videos, and sometimes they even browsed videos using the same piece of music if they really like that piece of music. Several interviewees even mentioned that they sometimes even intentionally skim videos to keep up with the trend of popular music, as noted by P22,

“I get to know many new songs just from Douyin. Without Douyin, maybe I won’t be able to know so many trendy pop songs. Douyin trendy songs (抖音神曲) can be heard almost everywhere in my life, on the street, on music apps, or even other people’s mobile ringtones.”

4.3 Concerns, Challenges, Negative Experiences, and Implications

Our interviewees mentioned several concerns, challenges, and negative experiences using Douyin.

Several interviewees noted that it was hard for them to find what exactly they needed when they used Douyin for learning, especially when the topic was a little too complicated and there are many relevant videos. They had trouble filtering out short videos that really fit their needs, and most of the time they have to search from other resources, such as searching on the Internet, if they really want to know more about the topic. Future design of such creative short video sharing mobile applications should consider how to facilitate information seeking behaviors for serious learners.

Some interviewees reported that some videos on Douyin were so negative for emotions, that they made them hopeless about real life, and even brought contagion of negative emotions within friends if they shared the video with each other. Recommendation algorithms might make the situation worse, as noted that sometimes they kept seeing negative content being recommended to them. Future design should consider assessing the negativity of videos, and to give interventions to viewers when risks of negative emotional contagion were detected. The design of the recommendation engine should also be improved to avoid accumulating negative emotions for viewers.

Privacy issues were another concern, as some interviewees noted that Douyin could recommend very relevant ads to them, which made them concern about the fact that Douyin knows too much about them, because it has so much data about their preferences for video content. Future research should look into how to better protect user's privacy while balancing the convenience brought by the recommendation system for video sharing mobile applications.

Some interviewees were concerned about addiction to Douyin, and its potential impact on younger generations, as they felt that many adolescents were sharing and watching videos intensively using Douyin. Future work must investigate how to mitigate user's addiction, and how to make Douyin a safer place for adolescents. Douyin provides valuable knowledge sharing videos which can benefit adolescents in acquiring knowledge that is not easy to gain from other sources, but the addiction to Douyin and its negative content might do more harm to the students.

5 Discussion

Living in a society where *guanxi* is highly valued and keeping face is important in daily life, Chinese people's use of social media platforms is deeply influenced by these cultural elements and social media landscapes [23, 11, 14], which also emerged from our results. Some users adopt Douyin partly because they want to present themselves as leading a "fashionable" lifestyle, and they do not want to be looked down upon by those who already adopted, which aligns with theory of the presentation of self [7], that people present their perfect selves at the

front stage of their social life. For Douyin users, using Douyin intensively and interacting with creative videos, content providers, and other viewers actively on Douyin become a social norm that should be presented at the front stage of daily life. Douyin users are willing to actively present themselves as Douyin users at the front stage, using jargons to socialize with each other in offline life. Further, they also have to manage their impression while using the app, that they have to present themselves through creative videos, likes, or comments on Douyin. Sharing videos on Douyin requires larger amount of self-disclosure than text or image, and they may struggle with a coherent presentation of self in this sphere. Future work should delve deeper into this question, to investigate how Douyin users negotiate the presentation of self between video and non-video modality, and between online and offline social life.

Our results also echo previous research that Chinese people, especially those from rural China, use social media for pursuing a “dreamed” life [22], and we argue that the form of short videos makes such “dreamed” life feel closer to real life, with increased exposure to creative visual stimuli, social features, and interactivity. Although the fate of Douyin is still unknown at this stage, it shows a trend of the changing culture in our society afforded by convenient and effort-less video sharing platforms, which should be further investigated to inform the design of better social media platforms.

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