

A Review of Live Streaming and Users' Donation in Live Streaming

Yi Peng^a and Qingqing Xiong^b

School of Economics and Management, Chongqing University of Posts and
Telecommunications, Chongqing 400065, China

^apengyi712@qq.com, ^b1037245146@qq.com

Abstract

This study was conducted to synthesize the existing studies on live streaming and users' donation in live streaming. The results show that the literature of live streaming mainly includes three aspects: user intention and behavior, live streamer intention, live streaming culture. In terms of the literature of donation in live streaming, studies used different methods, including survey research, data crawling, to explain donation based on multiple perspectives.

Keywords

Live streaming; donation; user intention.

1. Introduction

Live streaming is a new type of social media, in which people record and broadcast in real-time [1]. Live streaming platforms, such as Twitch, YouTube Live, Douyu, Huya, YY.com, Afreeca TV, enable anyone to create live content [2]. The content is broadcast and viewed synchronously [3].

Donation, refers to the act of users presenting virtual gifts to the live streamer who is broadcasting. The virtual gifts need to be exchanged in real currency at a certain ratio. Donation is a hot function applied by many live streaming platforms, such as "Bit" of Twitch, "Rubi" of YY.com, "Fish ball" of Douyu, "Tiger food" of Huya.

The development of live streaming has attracted many scholars' attention. At the same time, some scholars focused on donation in live streaming. With the increasing number of relevant literature, in order to fully understand live streaming and donation, this paper will comprehensively sort out the literature of live streaming and donation.

2. Live Streaming

2.1. Origin and Development of Live Streaming

Live streaming is also known as live video streaming, online streaming, online video streaming. Live streaming originated in the United States. The initial mode of live streaming was not to spread content in real time. In 1966, a college girl named Jennifer Ringley installed a webcam in her dormitory to record the pictures of the dormitory. These dynamic pictures are played on the website at a rate of refreshing every three minutes. Although the network was not yet popular at that time, this earliest live-stream received 5 million views.

Subsequently, live streaming began to attract more and more people's attention, and various live streaming platforms also appeared in people's lives. From the early Justin TV, to Twitch which created for e-sports games, then to other various forms of live streaming platforms, live streaming has been in a mature and stable development period.

At present, live streaming is a popular way for people to relax, entertain and market. The form of live streaming has gradually changed from PC terminal to mobile terminal, and the live content has also diversified, including game live streaming, chat live streaming, singing live streaming, eating live streaming, e-commerce live streaming. In this era of live streaming, live streaming has penetrated into all walks of life, such as education, tourism, medical care, food, e-commerce, bringing people rich life experience.

2.2. Related Research of Live Streaming

Research on live streaming includes three aspects: user intention and behavior, live streamer intention and behavior, live streaming culture.

In terms of user intention and behavior, Sjoblom and Hamari [4] explored the usage behaviors of users, including hours watched, streamers watched, streamers followed and subscription. Chen and Lin [1], Hu [5] investigated the users' watching intention and continuous watching intention. Yu and Xu [6], Hilvert-Bruce [7] discussed user participation behaviors from the perspective of Danmaku (a type of comment that is scrolled across the screen in real-time) and live streaming community. Chen [8] studied the intention to pay.

Regarding the live streamer intention, Zhou et al. [9] studied streamers' broadcasting intention from the perspective of social distance. Zhao [10] examined streamers' continuous broadcasting intention based on self-determination theory.

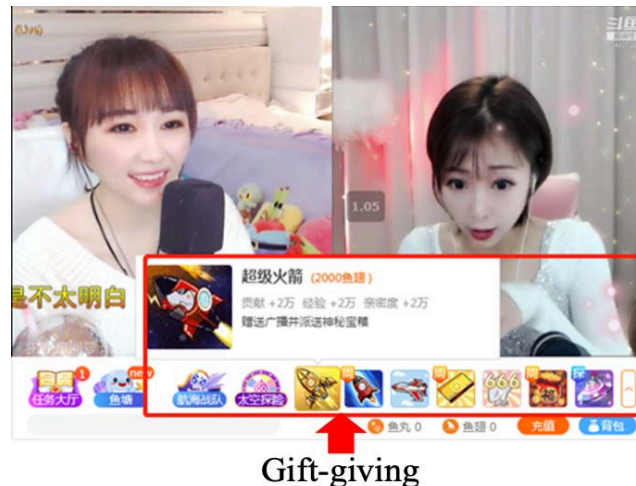
In terms of live streaming culture, Jia [11], Yuan and Sun [12], Zhang and Su [13], Zeng and He [14] analyzed live streaming culture, characteristics, and the emotion and psychology of users.

3. Donation

3.1. Origin and Development of Doantion

Donation first appeared in the street art environment, and artists can receive the money reward voluntarily given by the audience during or after the performance. In China, donation function in the network platform originated from Starting point Chinese net. In June 2009, Starting Point Chinese Net launched the donation function for the first time. After reading the articles, readers of the website can use the virtual currency of the website, which is starting point currency, to donate the authors of the article. The starting currency needs to be purchased in a certain proportion of real currency. At the same time, the Start Point Chinese Net has set up community lists such as "total donation", "personal contribution list", "daily donation list" to encourage readers to improve their donations.

In terms of live streaming platforms, YY platform first launched donation function. On this user-generated-content platform, users can exchange virtual flowers or virtual gifts to donate the streamer. The forms of virtual gifts are various, with values ranging from one Yuan to one thousand Yuan. After the user donates the streamer, the platform will share the donation profit with streamers according to the level of the streamer. Donation is also called gift-giving, financial support. Figure 1 shows the donation function in Douyu.



Gift-giving

Fig. 1 Donation function in Douyu

With the rise of the era of live streaming, donation function has become one of the main functions of the live streaming platforms. According to the 2018 White Paper of the Whole Platform Live Streaming Industry, in 2018, there were more than 140 million users who had donated, and the total amount of donation income received by the streamer reached 54.8 billion Yuan. Donation is not only the business model of live streaming platforms, but also an important behavior of users.

3.2. Related Research of Donation

The research on donation in the context of live streaming mainly includes the following three aspects.

Firstly, most of the studies use questionnaires or experiments to explore users' intention and behavior from different perspectives. Wan et al. [15] examined the donation intention of YY.com users based on the social-technical framework. Fan and Zhang [16] studied the influence of different interaction types on donation intention by experimental method. Yu et al. [2] discussed the gift-giving behavior of Afreeca users from the perspective of user participation. Li et al. [17] Based on the flow theory, using flow as an intermediary variable, studied the users' gift-giving intention. Huang et al. [18] investigated the followers' intention to follow and donate the streamer in the game live streaming from the perspective of the characteristics of the live streaming context, the streamers and the users' feelings.

Then, a few studies examined the actual donation behavior by crawling the real data of the live streaming platforms. Zhu et al. [19] collected and analyzed data related to gift-giving in Douyu. Zhou et al. [20] focused on the impact of the Danmaku on gift-giving, and collected and analyzed data related to the Danmaku and gift-giving in Douyu.

Besides, some studies explored the behaviors related to donation in live streaming. Whon et al. [21] studied social support behaviors, including financial support, emotional support and tool support. Whon et al. [22] discussed the digital patronage behavior on the Twitch and explained the difference between this behavior and donation.

4. Conclusion

Reviewing the studies on live streaming and donation, we found that scholars had discussed many aspects of live streaming, including user intention and behavior, live streamer intention and live streaming culture. For donation in live streaming, scholars used different methods, such as survey research, data crawling, to examine users' donation. However, few studies focused on the influence of the prime characteristics of live streaming on users' donation.

How the characteristics of live streaming, such as live scene characteristics, live streamer characteristics, influence users' intention and behavior may be considered in future research.

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