

Study of the propagation characteristics and narrative strategy of knowledge-sharing short video

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Abstract: *The presentation and propagation of knowledge is always carried by media carrier, and the media form and technologies determine the knowledge form and the narration evolution. With the development of Internet technology and the arrival of 5G era, great changes have taken place in the information acquisition habits of users, while paperless reading and visual reading have become more and more normalized ways of information acquisition. At this all-media era, short video combined with knowledge propagation which can meet users' need of information acquisition under an information environment with fragmented knowledge and time is becoming a new direction of promoting knowledge transfer and improving citizens' scientific literacy. Though knowledge-sharing short videos have been one of the important content categories in current We Media ecology, their development history is still short, so it is lack of systematic research in academic circle yet. This paper chose some typical knowledge-sharing short video samples from short video platforms, summarized the propagation characteristics of them, and analyzed the narrative strategy of knowledge-sharing short video from narrative subject, time, space, discourse and so on.*

Keywords: *knowledge-sharing short video; propagation characteristics; narrative strategy*

1. Introduction

According to the 51st Statistical Reports on Internet Development in China released by China Internet Network Information Center, as of December 2022, China's short video users has exceeded one billion for the first time, with user utilization rate reaching up to 94.8%.^[1] Short videos greatly enrich the cyberspace and have huge propagation advantage and user influence, and video information acquisition deeply impacts how people are connected to the world. Under this trend, new media technologies and propagation means have shaped a brand new form of knowledge, that is knowledge-sharing short video. Taking Douyin for example, 2022 Douyin Knowledge Data Report shows that the number of knowledge sharing video released in Douyin increased by 35.4%, and college live streaming increased by 46%, reaching to 21,103, in which the number of graphic knowledge content released increased by 167%. Moreover, the monthly live streaming made by knowledge sharing creators grew by 72.7%. Knowledge sharing contents continue to grow in Douyin.^[2] At present, many knowledge-sharing short video creators at home and abroad have attracted a large number of fans through quality contents, such as "Teacher Li Yongle", "Science Journey", "Kids Learning Tube" and so on. These creators not only have professional discipline literacy but also can express the knowledge hard to understand with straightaway words, enabling people to easily understand and master related skills and knowledge. Compared to traditional graphic knowledge form, short videos have their unique advantage of easily being spread. Therefore, the rise of know-sharing short videos is an inevitable outcome of short videos under the basic form of Internet to a great extent. This paper tries to start from analysis of propagation characteristics and narration perspective, selects typical cases to study know-sharing short videos, and summarizes and concludes their narrative characteristics and logic.

2. Definition and classification of knowledge-sharing short videos

Short videos, as the term suggests, is mainly featured by its short time. But this "short" is a relative concept, and till now there isn't a uniform division of time duration. In many definitions, the scholars pay more attention to real time, fragment, sociality, interactivity and convenience that short videos bring in the support of mobile intelligent terminals.^[3]

The paper integrates the definition of knowledge-sharing short video provided in The Inclusion of

Knowledge: A Research Report on Short Video and Knowledge Propagation which defines short video as targeting at sharing knowledge, taking knowledge explaining as main content, and enabling viewer to obtain knowledge.”^[4] On this basis, we defines knowledge-sharing short video as a new paradigm of knowledge production and a new carrier of knowledge propagation which visualize knowledge content, aim at sharing knowledge, take know explanation as main content, and enable viewers to obtain knowledge. After sorting and summary, we choose several typical classification forms, as shown in table 1.

Table 1: Classification of Knowledge-Sharing Short Videos

Platform	Knowledge type
Bilibili: Knowledge-sharing video partition	①Popularization of science ②Social sciences, law, psychology ③Humanities and history ④Business finance and economics ⑤Campus and study ⑥Career and workplace ⑦Creativity and design ⑧Wild Skill Association
The Inclusion of Knowledge 2.0: A Research Report of Short Video and Knowledge Propagation ^[4]	①Living skill videos ②Popularization of science videos ③Humanities and social sciences videos ④Educational videos ⑤Sports videos ⑥Career videos

3. Analysis of propagation characteristics of knowledge-sharing short videos

The narration of these knowledge-sharing short videos mostly start from micro and individual record, shoot some fragmented local parts, and finally blend a picture of knowledge practice.

3.1 Knowledge propagation fusing in scenes

Compared to traditional paper media and Internet propagation at personal computer times, short video platform based on mobile terminals is further fused with scene. The nature of mobile propagation is scene-based service, that's a perception of scene and the adaption of information. Thus, scene becomes another core element of media following content, form and social contact.^[5]

In short videos, knowledge is spread in different scenes, allowing knowledge to be displayed visually and auditorily. During this process, knowledge itself is encoded into different visual and auditory symbols, and the mass individuals blend them and show the result to audiences. In numerous science popularization short videos, the knowledge generation environment is shot immersively, with an extremely high watched full rate. The encoding logic supporting it is: short videos using audiovisual technologies emphasize on presentation of auditory symbols, bringing comfortable visual and auditory experience mentally and physically and making audience to feel like in the spot. In this way, visual sense, tactile sense and brain are interconnected to guide, stimulate and supplement each other's function, so that knowledge can step over from specific sense to rational knowledge in such "immersive" narration process. Take the representative work "Why Could the Earth Be Just One Cell of the Universe?" released in the public account "Science Journey" as an example. The explanation of the relationship between the earth and the universe in this work is not merely an extension of one sense, but links multiple senses. Visual technologies allow knowledge representation to be highly scenarized, which not only increases people's understanding of the universe, the Earth and the whole world scenes, but also enables people to have a deeper cognition and thinking of life and living.

3.2 Algorithms shorten the distance between users and knowledge

Recommendation algorithm mechanism satisfies the personalized knowledge need of users and achieves customized precise push service. Users can easily acquire knowledge that interests them, greatly improving user experience and facilitating to quickly enrich users' knowledge reserve. In return, in order to meet users' different need of knowledge, Douyin short video platform will be stimulated to cultivate excellent knowledge creators, which is beneficial to enhance the stickness between platform

and users and spread knowledge on the platform. After the users' searching, likes and forwarding behaviors as well as their browsing history go through big data computation, it is not difficult to depict the psychological scene of the users (As shown in figure 1).^[6] When Douyin short video platform obtains the space scene and psychological scene of users, it can create a new space between virtual and reality, to satisfy users' personalized need.

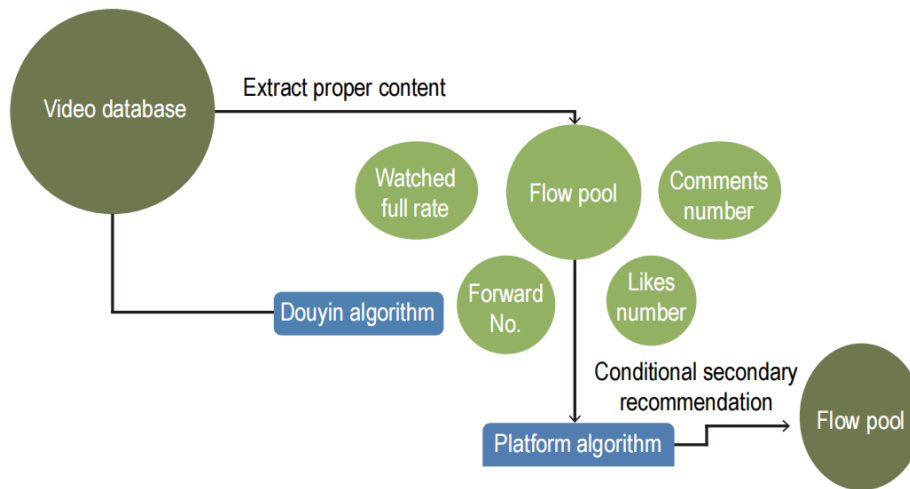


Figure 1: Recommendation algorithm mechanism of short video

3.3 Knowledge propagation from static to dynamic

Knowledge has two states: static knowledge and dynamic knowledge. Static knowledge generates in those fields and times with slow change, and tends to be stable after being verified by experts and accepted by the public. In the past decades, more knowledge has changed to be dynamic. When matters change quickly, much knowledge will be too late to turn to static knowledge and then will be replaced or amended. The rise of short video media attracts numerous front-line science researchers, experts and scholars to flock to the platform and begin to produce and create short videos with knowledge propagation as core content. At the same while, the general public coming from various industries and with varied identities are also attracted by short videos, they create knowledge-sharing short videos at all kinds of living scenes, making knowledge to stretch into a living perspective.^[7]

Another characteristic of knowledge propagation going toward dynamic from static is represented by "participatory culture". The science popularization workers, knowledge amateurs, interested audiences and fans in the creation of knowledge-sharing short video are also forming a network community of knowledge participatory production and propagation. The knowledge producers from multiple fields and industries are spreading knowledge at the short video platforms, and the topic and activity mechanisms of the platforms are clustering the people relative to one knowledge to form online virtual communities. The public discuss the knowledge and participate in production through the creation of short videos, in which course participatory production lets knowledge to generate collective intelligence. The enabling of short video media technologies lets the whole people to form their own "participatory culture" in the creation and expression of knowledge-sharing videos, enhancing interactive experience during propagation.

4. Narrative strategy and analysis of knowledge-sharing short videos

4.1 Narration subject

In knowledge-sharing short videos, the most significant characteristic of narrative subject is personalized narration. According to the data from ByteDance platform, 56 of the top 100 knowledge sharing creators with the number of fans choose personalized presentation.^[4] Short video makes personalized knowledge presentation to be possible, moreover, in short video information flow, the reveal of "face" could often increase differentiation and memory points, build a sense of intimacy, and cause continuous attention of users. Knowledge-sharing short videos always use professionals, experts, scholars or authorities as narration subject to show the knowledge related to their fields. So using

content creators mastering professional scientific knowledge as narration subject can help to add the credibility of popular science content, gain the trust of audience, and has been a key part of building knowledge-sharing short video IP. For example, the videos released by the account “Yi Lu Xiang Qian Wei Zi” uniformly adopt cross-in dictation. At the beginning of his videos, the narrator starts with “Hello, I’m Weizi, a doctor of emergency department”; in the middle part, Doctor Weizi dictates some cases of emergency department at the face of camera and popularizes some first aid knowledge; finally, he often finishes with “I’m Weizi. Follow me and know more first aid knowledge”. This uniform mode builds Weizi into a personal IP, and subdivides these content vertically by virtue of the label “emergency department”, thereby reinforcing the memory points of this account and the effect of propagation.

4.2 Narration time

In knowledge-sharing short videos, in order to better transfer information and value, the creators need to arrange and combine the content in a certain logic order. Generally, this process can be divided into two parts: one is to choose the time point when the events occur; the other is to arrange the sequence of events. Through a reasonable time arrangement, the audiences could understand and accept the information conveyed in the video more easily.

First, choose a time point when the event occurs. Because of the strong professional and academic nature of knowledge-sharing short videos, in most cases, their narration focuses on making an in-depth discussion and analysis of a certain field or topic. But these topics themselves often have complex background and correlative figure, thing and other elements. If the creator can’t master time node very well, the whole story line will be in a mess and incoherent. So, when we are making a knowledge-sharing short video, we should choose those time points representing the current hot spot and the latest progress as the main entry point as possible, so as to better express what the author would like to express. For example, when introducing a new technology or a new material, we can choose the currently hottest application scenarios or important moments such as scientific research result conference to introduce the topic. This will catch the audiences’ eyes quickly, and will help to guide them to further understand and explore the subsequent content.

Second, arrange the sequence of events. In knowledge-sharing short videos, frequently, fragmented micro narration doesn’t need to reach every aspect of all details, but simply shows the main thread and developing direction of the event. At this moment, the creators can use some common linear structure mode, such as “begin-proceed-climax-end”, to unfold each link and facts step by step and make audiences to know the whole thing deeply and comprehensively. Meanwhile, when arranging the sequence of events, we have to avoid too abrupt or indifferent turns, otherwise, they may affect the overall watching experience and information transfer effect.

In a word, in the narration process of knowledge-sharing short videos, the selection and arrangement of time is a very important step. Only by planning and organizing the time rationally, information can be clearly and effectively transferred to audience and lead to resonance.

4.3 Narration space

Regarding narration space, it mainly includes two dimensions: the first is the narration space at physical level, that’s the presentation of scenarios and environment involved in the knowledge; the second is the narration space at psychological level, that’s to build an emotional keynote conforming to the atmosphere that such knowledge point reveals through camera language and music and other elements.^[8]

First, build a narration space at physical level. Due to the abstraction of knowledge itself, it should be placed in a tangible scene so that audiences can understand and accept it. Take a Douyin account “The National Astronomical Observatories of the Chinese Academy of Sciences (NAOC)” as an example. In explaining astronomy related knowledge, without an astronomical telescope, it is hard to clearly describe basic astronomical knowledge merely relying on simple pictures and text. NAOC pays much attention to arrangement of narration space in its videos. Normally, they take astronomical observation device or starry sky background as the shooting scene, facilitating audiences to better understand knowledge points and enhance watching experience. In addition, scene arrangement details such as light, and background music would have an impact on audiences’ cognition of knowledge point and the grasping of whole narrative plot.

Second, build a narration space at psychological level. Beside of scene setting, the background music also plays a vital role in short video. Suitable background music can effectively guide audiences to get into certain emotional state and further deepen the expression of topic. Take the explanation of AI related knowledge as an example. Many accounts tend to use melodies with strong sense of science and technology as background music in cooperation with corresponding graphic effect, aiming to give people a sense of being there and intensify people's impression and memory of this field. Furthermore, when talking about the knowledge in a particular situation, some special sound effect such as sound of wind and water will be added to enrich audiovisual feels and improve people's immersive experience.

4.4 Narrative discourse

In narratology, the narrator can be seen as the "spokesman" or "teller" of the story world. But for knowledge-sharing short videos, as a special type of video work, they transmit information through certain narrative way and guide audiences to establish emotional resonance. Knowledge-sharing short video as an audiovisual text, its media platform itself has the traits of mass culture and social communication culture. Traditional medias retain the trait of "paper culture" in narrative discourse, while short video texts have developed "oral culture" featured by "oral narration", "chat" and "fragments", which are fragmented, spotted and nonlinear.

From the perspective of narrative language, oral narration is an instinct of human. Depending on short video media, knowledge is driven to develop, is getting rid of abstract, paper-based and detached written form during the propagation of short videos, and is transforming toward an audiovisual form of story, flexible and oral transmission. The stories are told by oral in a short, flat and fast way, the narrative encoding of knowledge is naturally colloquial, popular and spot-like, and the narrative perspective parallels with the perspective of the mass, all which promote knowledge to spread in a socialized and fragmented way. Taking the knowledge of finance and economics field for example, the professionals of this field talk in jargon or behave to be serious and rigid. "He Qingling", a We-Media blogger of finance and economics field in possession of 8.88 million fans at Douyin platform, used a lot of conversations in telling knowledge content, and explained professional content by "meme culture" popular on the Internet. In her short videos, the originally boring financial and economical knowledge is conveyed in a humorous way, making users to receive information well and get a good feeling of the brand.

From the angle of narrative perspective, in knowledge-sharing short videos, narrative perspective mainly includes three types: omniscient perspective, internal focusing perspective and external focusing perspective. Among the three perspectives, omniscient perspective applies to a comprehensive and profound explanation and analysis of one certain topic, such as I Am A Doctor, a medical care and health themed series program, exactly adopts such perspective; internal focusing perspective is often used to reveal people's inner activity or scene details, making the frames to be delicate and true; while external focusing perspective is more used to express environmental atmosphere or event proceeding, so as to enhance visual impact and sense of presence.

5. Conclusion

Intelligent technologies drive knowledge propagation to start a new reform. Constantly iterative propagation carrier results in an irreversible trend of knowledge propagation by short video. This paper analyzed the propagation characteristics of knowledge-sharing short videos and their narrative mode to explore the influence of this new form of media. The research results indicate that the development of short video provides a new approach for knowledge propagation, lowers the threshold of knowledge acquisition, and greatly push the inclusion of knowledge. The paper considers that, along with the continuous revolution of technology in the development process of society, knowledge-sharing short video will release greater social value, and will own superior content production and propagation, wider participation degree, and more intelligent connection state.

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