



Research on Evaluation-oriented Short Video Self-media Matrix Construction

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Abstract. Popular science communication, as an essential branch of communication studies, plays an irreplaceable role in enhancing the scientific literacy of the general public. In the new era, short videos have emerged as a novel medium for popular science communication. With their accessibility, engaging and lively nature, moderate duration, and alignment with the aesthetic preferences of the younger generation, short videos have become a significant avenue for disseminating scientific knowledge. With the rise of short video self-media and support from government policies, evaluation-oriented short video content creation has found a broad platform for development. Creators must adeptly master video editing and montage to improve video quality and maintain an appealing pace, so they can attract the attention of the youth better and help them understand and accept scientific knowledge more effectively.

Furthermore, for creators aiming to establish new media matrices, mastering these technical skills is not only beneficial for elevating their creative abilities but also pivotal in enhancing the effectiveness of popular science communication. In this process, creators must focus on the rationality and logical coherence of the popular science content to make it more in line with the audience's needs and cognitive patterns, thereby improving the efficacy of popular science communication.

Keywords: New Media Matrix, Evaluation, Short Videos, Montage

1 Introduction

In the backdrop of the new media era, the short video industry has rapidly risen, with platforms like Douyin (TikTok), Kwai (Kuaishou), Bilibili, and Xiaohongshu (Little Red Book) emerging as the "leading players." These platforms have matured in terms of their functionality, meeting the needs of the majority of users, and have given rise to a new consumption trend in the convergent media era.

The new media content matrix "1301 Lab" is a digital media account that provides viewers with evaluative content related to digital technology. Essentially, it uses montage techniques to create a series of evaluation videos, presenting products or hot topics in the field of technology to convey information and perspectives to the audience. Therefore, in the design and production of short videos for "1301 Lab," great attention

is paid to the alignment of the content with specific usage scenarios, including the diversity of its source materials and the strategic use of montage techniques.

1.1 Current Development

The current media environment provides more channels and possibilities for the dissemination of popular science videos, as the development of popular science videos was slow during the early stages of internet proliferation. The development of evaluation-oriented videos relies on the audience's demand for valuable information, the provision of high-quality content, and the distribution role of content creators. As life, work, and study pressures increase, the need for outlets for emotional release has grown, making entertainment content more readily accepted, which is also an inevitable trend in the development of short videos. Apps like TikTok, Kuaishou, and Bilibili, as mainstream short video sharing platforms with active users and a wide range of content, are beloved by a large user base. When searching for keywords like "science popularization" or "evaluation" on these apps, you can find numerous TikTok accounts primarily focused on scientific outreach. Among these, there are high-quality accounts with a large following, which become leaders in the scientific outreach category on TikTok. This includes official accounts like the China Science and Technology Museum and influential accounts with millions of followers, such as "-LKS-", "TESTV Official Channel," "Yingshijufeng" and others.

The number of users is a crucial factor in determining the future development of short video platforms. Establishing a stable and long-lasting user base is an essential prerequisite for competition in the short video platform landscape. Over time, the continuous growth in the number of users can positively influence the development of short video platforms. This also indicates that short video platforms have firmly established their foothold in the competitive market for meeting people's needs for information, information dissemination, and entertainment ^[1].

1.2 Research Significance

Evaluation-oriented self-media is a new type of self-media that focuses on producing and disseminating information and evaluation programs related to digital products such as smartphones. In modern society, with increased work pressure and a faster pace of life, audiences tend to prefer shorter video content. To effectively engage and target the audience, video editing must prioritize the fragmentation of information, retaining only the most engaging elements. The primary audience for evaluation-oriented self-media consists of individuals interested in electronic digital products and consumers seeking evaluative information related to smartphones to make purchase decisions. This professionalism has the potential to influence existing perceptions of certain products and, to some extent, alter consumer purchasing intentions. Therefore, researching the development trends and operational models of evaluation-oriented new media matrices holds practical and theoretical significance. By studying the development trends and operational models of evaluation-oriented self-media, a deeper understanding of the current

state and future trends in the digital product industry can be gained, providing consumers with more professional purchase advice and services. Furthermore, the development of evaluation-oriented self-media can promote the healthy growth of the digital product industry and enhance industry technology and quality standards.

2 Design Analysis

2.1 Video Matrix Design

Under the broad theme of popular science evaluation, a new media matrix has been constructed and distributed across three platforms: TikTok, Kuaishou, and Xiaohongshu. The primary content revolves around digital products, photography equipment, and tutorials, as seen in Figure 1 to Figure 3.



Fig. 1. Douyin(TikTok)



Fig. 2. Kwai(Kuaishou)



Fig. 3. Xiaohongshu(Little Red Book)

In the field of digital technology video design, editing and montage techniques have proven to be an effective production method. Through editing and montage, high-quality and professional knowledge in digital science can be effectively conveyed to the audience. This method serves as a means to provide the most professional knowledge and usage tips about digital products for digital enthusiasts and professionals. Additionally, the use of trending topics can capture the audience's attention effectively^[2].

Building a personal brand and implementing precise marketing are essential, and the foundation of precise marketing lies in accurate positioning. The content positioning of the new media matrix account is the review-oriented influence. In the initial stages, finely-tailored video production is necessary to meet to the needs of the target audience. Only by increasing the “stickiness” of followers can later revenue monetization be facilitated.

2.2 Video Content Design Concept Philosophy

In the early days of the internet, the development of popular science videos was slow, but the current media environment has significantly expanded, in its channels and possibilities. However, with the increasing competition on the internet, initiatives like learning programs and new stars programs continuously push for knowledge copyright protection in online spaces. This protection is crucial for the preservation of knowledge copyright in the online space^[3].

The new media matrix account *1301 Lab* employs montage techniques that is suitable for evaluation-oriented videos, significantly improving the content quality of popular science videos. In content production, a comprehensive content framework is built through mind mapping. This involves analyzing popular topics related to products and creating corresponding captions and shooting scripts. During the creation of captions and shooting scripts, considerations are made on how to capture the necessary shots and how to use editing techniques to achieve the desired effects after shooting.

2.3 Application and Analysis of Filming Techniques in the New Media Matrix 1301 Lab

2.3.1 Summary and Focus.

In content production, material is selected, cut, and assembled through the use of shot transitions, scenes, and segments. This process eliminates redundant and unnecessary portions, emphasizing key points, distinctive features, and expressive details. This ensures that content is well-structured, appropriately concise, and not overly complicated, achieving a high degree of summarization and concentration^[4]. An example can be seen in the episode titled *[Sony A7M2]Worth or not after 8 years ? Sony Full-Frame Mirrorless A7M2* which centrally discusses the discomfort of holding the camera. In this case, the video only emphasizes the discomfort in the little finger, as shown in Figure 4.



Fig. 4. Holding the camera

2.3.2 Creating Unique Temporal and Spatial Elements.

Post-production editing techniques can manipulate real-time and space by selecting, processing, and transforming them, creating new temporal and spatial sensations. Techniques such as dissolves and fades can break spatial limitations, allowing viewers to instantly travel from Guangdong to Xinjiang, or transcend time restrictions. Crosscutting and juxtaposing motions in two different spaces can create suspense or reveal inner emotional states^[5]. An example is found in the episode titled *Are RGB Stick Lights Affordable and Good to Use? | You Deserve It! Sandmarc B320* which explores the various effects of the lighting rod in different scenes. To help viewers intuitively grasp these effects, montage techniques are skillfully used to edit them into the same footage. Narration and scene transitions are used to explain the effects of using the lighting rod in different scenarios. The editing process aims to be concise and clear while maintaining a rhythmic flow, allowing viewers to easily understand the intended message without feeling overwhelmed. This creates a natural and fluid viewing experience, making it easier for the audience to appreciate and comprehend the lighting rod's use in different settings, as shown in Figure 5 to Figure 6

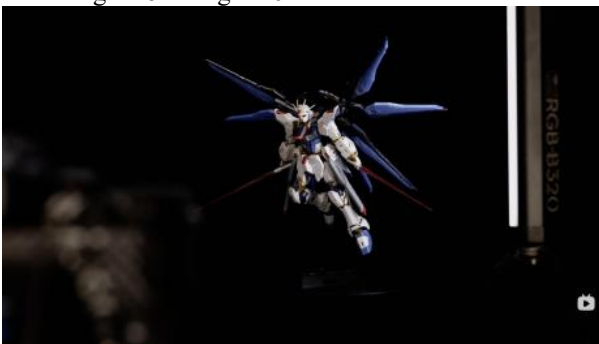


Fig. 5. Lighting rod in scenarios



Fig. 6. Effect of the lighting rod

3 Design and Implementation of New Media Matrix

3.1 Specific Video Content Production

In the production of video content, various modes are used, including the Apple-style review, in-depth experiential reviews, and trending topic evaluations^[6]. The entire process, from scene preparation in the early stages to material recording in the mid-stage and post-production editing and color grading, demands a high level of professionalism. For example, in the initial stages, the log footage is captured using a Panasonic S5 camera, three-point lighting is utilized with the key light setting at 5500K, lighting accessories include an 80cm softbox and grid, fill light is provided by a 6500K lighting rod with a butterfly, and the back light is achieved using boards with a 7500K setup. In post-production, DaVinci Resolve software is used to convert the log to Rec.709 while retaining the maximum dynamic range and adjusting the white balance to 6500K, as shown in Figure 7 to Figure 10.



Fig. 7. Actor preparation



Fig. 8. Scene preparation



Fig. 9. Video material shooting

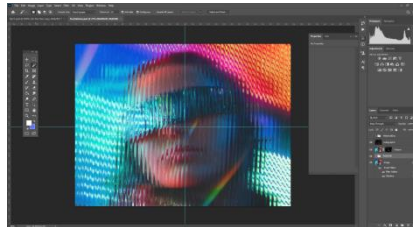


Fig. 10. post production

3.2 Background Design

To enhance the tech-oriented atmosphere in the video's overall design, a black background is used, serving as the primary source of technological appeal. Black not only creates a cleaner look but also adds texture and a sense of technology to the video. During the recording of evaluation videos, a dormitory room in university was chosen as the filming location. In the corner of the room, a specially designed evaluation mini-studio was set up. So does the dark color scheme for the room, lighting, and background. Nearly everything that could be black was black, and all items were well chosen and produced to enhance the sense of technology, as shown in Figure 11 and Figure 12.



Fig. 11. background design 1



Fig. 12. background design 2

3.3 Music Selection

To make the video more appealing, rhythmist music with strong beat is always a good choice. The rhythmic qualities can immerse the audience further into the videos. In any video, auditory media should be fully used while emphasizing visual effects. Most music was selected because of its rhythm, and music with stronger rhythm is always used repeatedly. For example, the opening background music *Sport Future Bass [Sports Music]* by MOKKA _ Spot is royalty-free music selected after careful consideration. It's rhythmic is calm and smoothing, adding a pleasant atmosphere to the video.

3.4 Copywriting

In the process of copywriting, it's important to create a vivid title that captures the essence of the video. Self-media titles often have more flexibility than titles created by professional media. To achieve better dissemination, it's essential to create engaging titles.

The use of contrasting narratives is a common technique to highlight the contrasts in the narrative, emphasizing the fundamental features of the subject, and guiding the audience into the main content. For example, in the episode *Upgrade or Squeeze Toothpaste? iPhone14 Pro & Android - Which is Better? Or Stick with iPhone 13?* The contrast between the iOS and Android ecosystem clearly emphasizes the advantages of the iOS ecosystem.

In the ending of the videos, there will be some self-reflection parts. It is an essential part of popular science evaluation videos. Self-media is a meaningful content form that provides valuable information to the audience and helps them with their decisions. As creators, it's important to demonstrate real concern for product quality and provide honest assessments to earn the trust and attention from all consumers.

4 Results Presentation

4.1 Cover Display

The new media matrix accounts which focus on evaluations are distributed across three platforms: Douyin (TikTok), Kuaishou (Kwai), and Xiaohongshu (Little Red Book). Mainly about digital products, photography equipment, and tutorials, as shown in Figure 13 to Figure 15.



Fig. 13. Photography Equipment



Fig. 14. Tutorials



Fig. 15. Digital Products

4.2 Poster Display

A series of posters designed for the short video evaluation account "1301 Lab." The color scheme for the entire set of posters primarily features black, white, and silver, creating a cool, futuristic, and technological atmosphere. The use of cyberpunk and neon lighting styles gives the posters a unique sense while showcasing the development trends in modern technology and the possibilities in the future, as shown in Figure 16 to Figure 18.

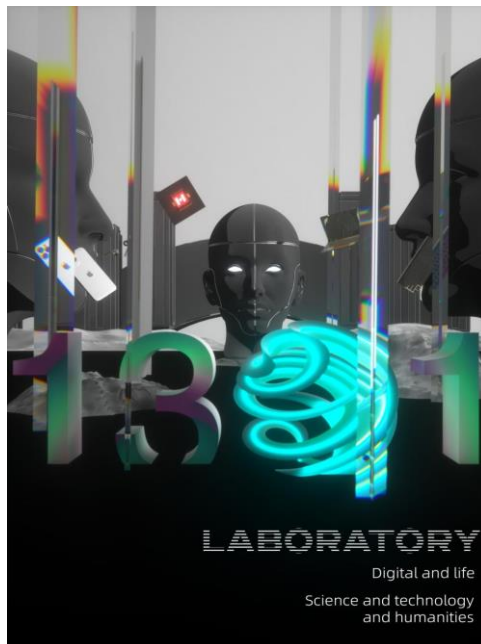


Fig. 16. Digital Technology Poster



Fig. 17. Tutorial Poster

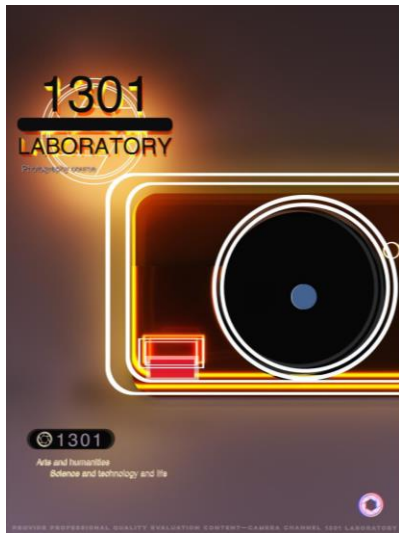


Fig. 18. Photography Equipment

5 Conclusion

Short videos should have intellectual and emotional elements, and these qualities should be clearly and accurately conveyed through the video's presentation. In conclusion, the key to attracting viewers and achieving success lies in the use of montage techniques, the thoughtful integration of sound and visuals to create valuable and meaningful short video works with a higher connotation and ideology.

Appendix

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