Film and Television Editing in the Era of Big Data Based on Artistic Characteristics

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Abstract: This article aims to explore the artistic characteristics and innovative practice of film and television editing in the era of big data. Through in-depth research and analysis, this article reveals how big data affects and promotes the development of film and television editing art, and puts forward innovative editing methods based on big data. The application of big data technology has significantly improved the accuracy and audience satisfaction of film and television editing, and also put forward new skills requirements for editors. Through the data-driven editing decision process, we can find that the rhythm control, emotional guidance, visual aesthetics and narrative logic of the film have been significantly optimized. In addition, the integration of individualized elements further enhances the audience's viewing experience. This article provides specific innovation paths and suggestions for the film and television industry and editors in order to promote the sustainable development and progress of film and television editing art. This not only helps to improve the production level and audience experience of film and television works, but also points out the direction for the future development of film and television industry.

1. Introduction

With the rapid development of big data technology, the ability of data collection, storage and analysis has been improved as never before. This change not only affected many traditional industries, but also had a far-reaching impact on the film and television industry. In the era of big data, film and television editing is no longer just a combination of technology and art, but begins to integrate more data analysis and audience feedback, making the editing process more accurate and targeted [1]. The purpose of this study is to explore the artistic characteristics of film and television editing in the era of big data, analyze how big data affects editing decisions, and how editing art develops and innovates under this new background.

With the introduction of big data technology, film and television production can more accurately understand the audience's preferences and optimize the editing content, thus enhancing the market competitiveness and audience satisfaction of the works [2]. Therefore, the study of film and television editing in the era of big data will not only help to improve the production quality of film and television works, but also provide new ideas and methods for the development of film and television industry [3]. The main purpose of this study is to deeply analyze the artistic characteristics of film and television editing in the era of big data, and to explore how to optimize the editing process by using big data technology to improve the artistic effect and audience experience of film and television works.

2. The integration of big data and film and television editing

2.1. Application of big data technology in film and television editing

With the continuous development of big data technology, its application in film and television editing is increasingly extensive. Big data technology can help editors analyze audience preferences more accurately and optimize editing decisions, thus improving the artistic effect of works and audience satisfaction.

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In the era of big data, data analysis has become an indispensable part of film and television editing. By analyzing the massive audience data, editors can more accurately understand the audience's viewing habits and preferences, so as to make more reasonable editing decisions [4]. For example, by analyzing the data of the audience's staying time in a certain segment and the number of repeated views, the editor can judge which content is more popular with the audience, and then keep or strengthen it when editing [5].

User behavior data, such as viewing duration, likes and comments, are important indicators to reflect audience preferences. Table 1 specifically shows the practice of editing guided by user behavior data.

Table 1 User behavior data guide editing practice

User Behavior Data	Data Meaning	Guiding Role in Editing Practice
Watching Duration	Reflects viewers' interest and attraction to the content	If a certain section has a short watching duration, it may need optimization to attract viewers. If a section has a long watching duration, it can continue to be used or strengthened in content creation
Likes	Represents viewers' recognition and preference for the content	Sections with a high number of likes can be regarded as content favored by viewers, worthy of retention or strengthening in editing. Sections with a low number of likes may need adjustment or replacement
Comment Content	Provides direct feedback and viewpoints from viewers on the content	Analyze keywords and sentiment orientations in comments to understand viewers' concerns and emotional needs. Adjust editing strategies based on comment feedback, such as increasing or decreasing the proportion of certain types of content
Shares	Reflects whether viewers are willing to recommend the content to others	Content with a high number of shares has high dissemination value and can be prominently displayed in editing. For content with few shares, it is necessary to analyze the reasons and make corresponding optimizations
Danmaku/Comment Interaction	Shows viewers' reactions and discussions during real-time viewing	Observe hotspots and trends in danmaku/comments to understand viewers' real-time feedback. Adjust the editing rhythm based on interaction to maintain viewers' participation and interest

Through in-depth analysis of these user behavior data, editors can more accurately grasp the audience's preferences and needs, so as to optimize the editing scheme and improve the quality of works and audience satisfaction. This data-driven editing method is helpful to improve the attractiveness and communication effect of the content.

2.2. New requirements of film and television editing art in the era of big data

The era of big data brings new challenges and opportunities for film and television editing, and also puts forward new requirements for editing art.

In the era of big data, the audience experience has been promoted to an unprecedented height. Editors need to fully consider the individual needs of the audience and meet the tastes of different audiences through accurate data analysis. This means that editors need to have stronger data awareness and analytical ability in order to better capture and meet the diverse needs of the audience. The era of big data puts forward higher requirements for editors. In addition to traditional editing skills, editors also need to master interdisciplinary knowledge such as data analysis and user behavior research [6]. In addition, with the continuous development of technology, editors need to constantly learn and update their knowledge system to adapt to the new editing tools and technical environment. These new skills and requirements have undoubtedly brought greater challenges and room for growth for editors.

3. Practice of film and television editing based on artistic characteristics

3.1. Editing skills and artistic expression

In the practice of film editing, skills and artistic expression are inseparable. Editors skillfully combine image materials by mastering various editing techniques, thus creating unique artistic effects. Rhythm control is one of the core skills in film and television editing. Table 2 shows the role of rhythm control in film and television editing.

Table 2 The role of rhythm control in film and television editing

Element	Description	Effect
Shot Length	Control the pace by adjusting the duration of each shot.	Long shots bring a sense of relief, while short shots speed up the pace.
Switching Speed	The speed of switching between shots can affect the overall rhythm.	Fast switching enhances tension, while slow switching creates a smooth atmosphere.
Sound Effects Coordination	Synchronizing sound effects with shots can enhance the perception of rhythm.	The strength and speed of sound effects match the shots, jointly constructing the film's rhythm.
Importance of Rhythm Control	It is a core skill in film and television editing, directly affecting the viewing experience and emotional guidance.	Enhance the audience's viewing experience and effectively guide their emotions.

By adjusting the length of the lens, the switching speed and the sound effects, the editor can control the overall rhythm of the film and create a tense, soothing, cheerful or heavy atmosphere. The control of this rhythm not only affects the audience's viewing experience, but also effectively guides the audience's emotional trend. For example, the use of fast editing and tense sound effects in key scenes can enhance the audience's tension and expectation, while in warm scenes, slow camera switching and soft music may be used to create a warm atmosphere.

Visual aesthetics and narrative logic in film and television editing are intertwined. Editors need to ensure the narrative coherence of the film through accurate editing, and at the same time pay attention to the visual elements such as composition, color matching and light and shadow effects of the picture to create a pleasing picture [7]. In narrative, reasonable lens sequence and transition design can guide the audience's attention and help them better understand the story. Visually, through clever color adjustment and picture composition, the editor can strengthen the emotional expression of the film, so that the audience can enjoy it visually and feel the emotions and themes conveyed by the film more deeply.

3.2. Editing innovation guided by big data

In the era of big data, the practice of film and television editing is undergoing unprecedented changes. The application of big data technology provides editors with more innovative space and possibilities.

Traditional editing decisions often rely on the experience and intuition of editors. However, in the era of big data, editors can use multiple information such as audience feedback data and market analysis data to assist editing decisions. These data can help editors to judge more accurately which content is more popular with the audience and which editing techniques can resonate with the audience more [8]. Through the data-driven editing decision-making process, editors can optimize the editing scheme more scientifically and improve the market competitiveness and audience satisfaction of their works, as shown in Table 3.

The era of big data emphasizes individualized and customized services. In film and television editing, this also means that editors need to consider the individual needs of the audience more. By analyzing the audience's viewing habits and preferences, editors can incorporate more individualized elements that meet the audience's tastes in the editing process. For example, editors can use different editing styles and narrative techniques to present the story content for audiences of different ages. This individualized editing practice can not only enhance the audience's viewing

experience, but also further expand the audience range of film and television works.

Table 3 Data driven editing decision process optimization

Process Step	Specific Content	Optimization Effect
Data Collection	Collect viewer feedback, market data, historical editing effects, and other information.	Provide data support for editing decisions and understand viewer preferences and market trends.
Data Analysis	Conduct in-depth analysis of the collected data to identify key indicators and influencing factors.	Identify strengths and weaknesses in the editing plan and clarify the optimization direction.
Editing Plan Development	Based on the results of data analysis, develop or adjust the editing plan, and clarify editing goals and strategies.	Ensure that the editing plan better aligns with viewer tastes and market demands.
Editing Implementation	Perform editing according to the established plan, paying attention to elements such as shot selection and rhythm control.	Implement the editing plan to improve the overall quality of the work.
Effect Evaluation	Evaluate the editing effect through viewer testing, market feedback, and other methods.	Verify whether the optimized editing plan achieves the expected results.
Iterative Optimization	Continuously adjust and improve the editing plan based on the effect evaluation results.	Continuously improve to enhance the market competitiveness and viewer satisfaction of the work.

4. Audience survey and analysis of film and television clips in the era of big data

In order to further explore the influence of big data on film and television editing and the audience's acceptance and satisfaction with this kind of innovative editing, this section conducted an audience survey and analyzed it based on the survey results.

4.1. Audience survey design

In this survey, 1200 valid samples were collected by online questionnaire. The content of the questionnaire covers the audience's cognition, acceptance, satisfaction and specific editing effect evaluation of big data applied to film and television editing.

4.2. Data analysis and results

Table 4 shows the audience's cognition of big data editing. 45% of the audience said they knew about big data editing, while 60% of the audience thought that big data editing could improve the viewing experience, which showed that big data editing had a certain awareness and positive influence among the audience.

Table 4 Audience Awareness of Big Data Editing

Awareness Dimension	Option	Percentage
Understanding of Big Data Editing	Understand	45%
	Somewhat Understand	35%
	Completely Don't Understand	20%
Impact of Big Data Editing on Viewing Experience	Improve	60%
	No Significant Impact	30%
	Decrease	10%

Table 5 shows the audience's acceptance and satisfaction with big data clips. 50% of the audience expressed great acceptance of big data editing, while 40% of the audience expressed great satisfaction with the viewing experience brought by big data editing, which further proved the popularity of big data editing among the audience.

Table 5 Audience Acceptance and Satisfaction with Big Data Editing

Survey Dimension	Option	Percentage
Acceptance	Very Acceptable	50%
	Somewhat Acceptable	30%
	Not Acceptable	20%
Satisfaction	Very Satisfied	40%
	Somewhat Satisfied	40%
	Not Satisfied	20%

Through this audience survey and data analysis, we can draw the following conclusions:

(1) Big data editing has a certain degree of awareness among the audience, and most viewers think it can enhance the viewing experience.

(2) The audience's acceptance and satisfaction with big data clips are high, which shows the potential of big data clips in the film and television industry.

(3) There are still some viewers who don't know much about big data editing or say they don't accept or are dissatisfied, which suggests that practitioners should pay attention to the needs of this audience while promoting big data editing.

5. Conclusions

Through in-depth analysis of the artistic characteristics and practical innovation of film and television editing in the era of big data, this study has made the following main findings:

Firstly, big data has had a profound impact on the art of film and television editing. Through data analysis, editors can have a more accurate understanding of audience demand and market trends, thereby optimizing editing plans, enhancing the artistic effect and commercial value of their works. This change not only changes the traditional editing process, but also injects new vitality into the development of the film and television industry. Secondly, the art of film and television editing based on big data has shown significant innovation points. The data-driven editing decision-making process makes editing more scientific and accurate, while the integration of individualized elements enhances the audience's viewing experience. These innovative practices not only enrich the artistic techniques of film and television editing, but also expand the audience and dissemination channels of film and television works.

Looking ahead to the future, with the continuous progress of big data technology and the expansion of application fields, film and television editing art will usher in more development opportunities. Editors need to constantly learn and master new technologies to adapt to this change and create more excellent film and television works. Furthermore, it is also hoped that the film and television industry can make full use of the advantages of big data technology to promote the continuous innovation and development of film and television editing art.

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