

Discussion and Practice of Film and Television Production: Innovation with Big-data

Fangjiao Li^{1, a}, Yuqiang Zhu^{1, b}, Xiang Zhang^{2, c}, Rao Fu^{3, d}, Litian Deng^{4, e}

¹Digital Film and TV Production, Faculty of International Media, Communication University of China, 100024, Beijing, China

²Computer Science and Technology, Department of Computer Science and Technology, Tsinghua University, 100084, Beijing, China

³Digital Media Arts, School of Arts and Media, Beijing Normal University, 100089, Beijing, China

⁴Software Engineering, School of Computer Science and Cybersecurity, Communication University of China, 100024, Beijing, China

^alifangjiao123@sina.com, ^byzhu1102@outlook.com, ^czx1239856@gmail.com,
^dfurao71123@163.com, ^e1059002464@qq.com

Abstract. The significance of big data analysis strategy has been extended to more than the information conveyed by the data itself, particularly with the development of information technology. Concerning the overall level of society and economy in contemporary world, practitioners for the film and television production industry are required to conduct an intrinsic and comprehensive analysis of market concerns and user needs to form a more scientific and perfect data analysis system. This paper delves into the capabilities indispensable for the art and communication industry regarding the technology background and proposes effective methods for the market mechanism of film and television production.

Keywords: big data; Film and TV production; discussion and practice.

1. Development Status of Film and Television Production Industry in the Era of Big Data

Data is a symbolized demonstration of objective things, while big data is the consequent product emerging from the analysis of considerable Internet data and thriving artificial intelligence. Film and television production is an industry based on producing and disseminating information. Due to the evolution of times, the information source of this field grows more extensive and the corresponding content has become more abundant, which diversifies the requirements of mass audience. By analyzing the collected information and accurately recognizing the needs of the spectators, the efficient positioning and communication of the intrinsic needs of the audience can be effectively realized [1].

Large quantities of data and information in the transmission of film and television production began to manifest different patterns, which can continually evolve and innovate the traditional forms of film and television production. Based on the market context as the research target, along with the audience group data analysis and the application of theory back into the market itself, the industry will be enabled to its essential value through proper estimation and redevelopment. As the crucial part of the future industry, there is growing propensity for this pattern to become the foundation of further development. In recent decades, the Internet-based movies and TV series has not only survived the fierce market competition, but they defeat their rivals in many aspects, which is the result of effective analysis and design of film data and firm grip of audience psychology. From 2015 to 2018, the market size of Internet-based movies has grown by nearly 33 times, which is illustrated in the figure below (Figure 1).

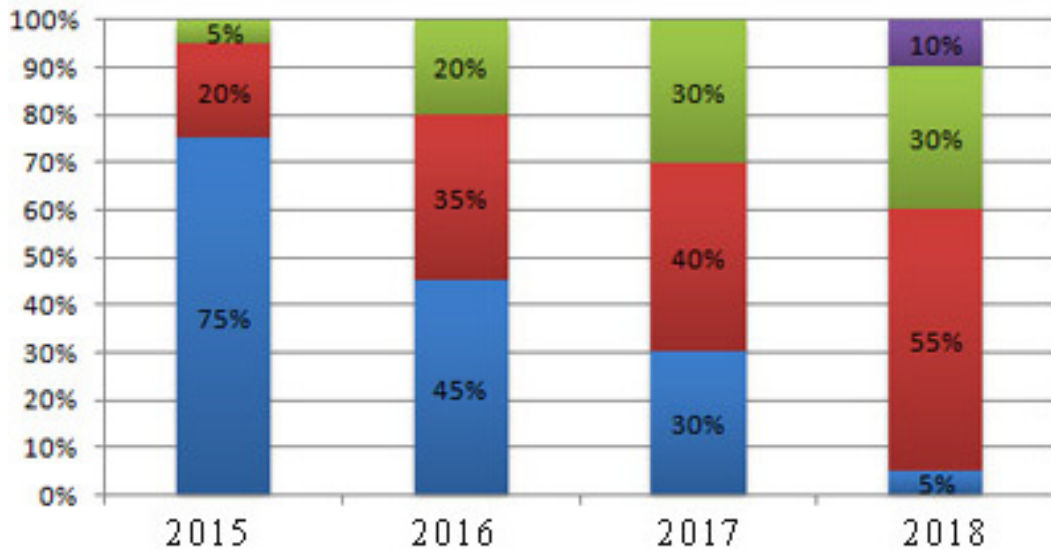


Figure 1. the growth of Internet-based film market

Numerous data reveal that the society has been gradually mediumlized. The evolution of new media network technology not only entitles the public to more choices, but also extends the approaches of film and television production and communication. Therefore, several questions are raised for practitioners of film and TV production, most of them are worth discussing. For example, how to create popular and personalized program for different groups in diverse space-time, how to utilize big data analysis of content sharing and interaction, how to dig the commercial value underneath the production and dissemination, how to combine the Internet and television [2]. In order to understand the important role of big data more intuitively and clearly, we present a model for big data marketing plan, as shown in Figure 2.

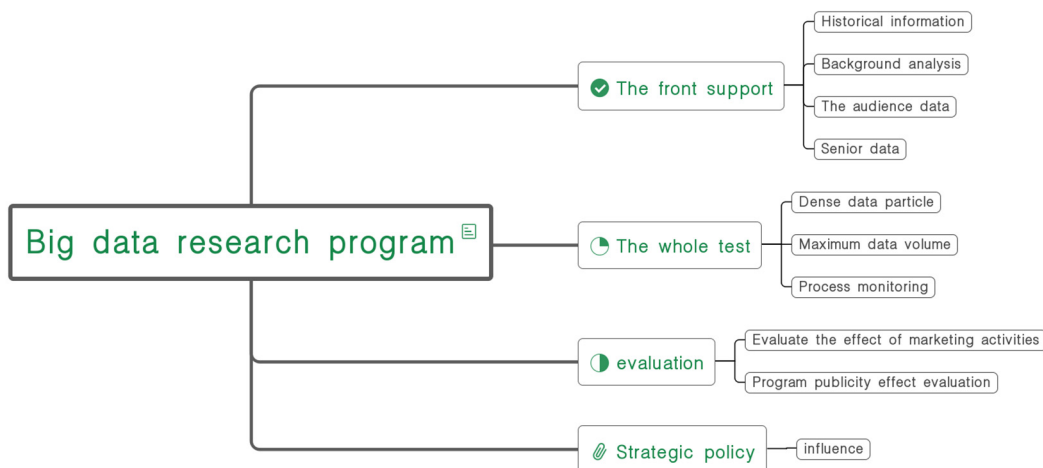


Figure 2. Big data marketing schema

2. Conduct in-depth Data Mining and Introduction

Based on the structural characteristics of data, we may carry on effective summary and analysis of them through mathematics tools. However, in the process of film and television production and communication, unstructured data can be generated, which requires industry practitioners to conduct in-depth data introduction and mining. For example, the objects of the survey must vary according to the aesthetic needs of different genres of movies and TV series. During the process of production,

advertisers must pay attention to the shape of specific characters as well as the amalgamation of internal layers in detail, while concisely extract the content of the existing database and accurately predict the developing trend of the production and dissemination in the future [3]. In simple terms, there are three main sources of data for film and television production, the former two are the content directly derived from database and the information collected from data repositories. The third source is based on the model established from the analysis of data, which allows the data to analyze, judge and predict themselves. Finally, valuable information contained in the data can be extracted to provide accurate judgment and decision making for film and television studios.

3. Enhance the Cultivation of Film and TV Production Talents Fit for Big Data

With the continuous expansion and development of film and television industry, both traditional media and rising online media companies have higher requirements and expectations for professional film and television production talents. Despite the bright prospect of the market, current skills and quality of relevant personnel cannot satisfy the needs of the industry. Therefore, in order to better meet the demand for talents in film and television production in the era of big data, it is necessary to foster the cultivation of interdisciplinary talents with creative capability and innovative thinking. First of all, relevant practitioners should consciously carry out training on innovation ability and gain accurate and detailed control over the developing trend of the industry [4]. Secondly, we should constantly improve our professional theoretical knowledge. Film and television works are artistic works originated from life but higher than life. The artistic accomplishment and professional quality of film and television producers themselves determine the quality of film and television works. However, under the influence of big data and Internet, only when relevant professionals ceaselessly promote their professional skills and combine theory with practice can the film and television works presented not only meet the needs of the public but also have social artistic value. Finally, the contents involved in the film and television works are often interdisciplinary and interdomain, the basis of which is collective art creation. This requires related professionals to have crossover thinking capability and cultural background of western, eastern and regional ethnic understanding, which serves as the prerequisite of a steady stream of creative power relying on big data.

4. Conduct Portrait Research on Film and Television Audiences

What accompanies user's exposure to film and TV artworks through multiple media is their unique behaviors. User operations (i.e. mouse or keyboard input) can serve as a direct source of data. The effective combination of content or channel switching, along with other relevant data forms a mathematical model with data value, that is, the portrait of the audience group we studied. By describing and matching the characteristics of audience portraits, logical and reliable data contents can be established in the mathematical model. In 2015, NRTA(The National Radio and Television Administration) launched a platform with real-time box office statistics, covering all domestic cinemas. Through in-depth mining and cross-analysis of the collected data, the social value and sales data generated by the film itself can be accurately reflected, even including relevant data such as the viewing habits of the public. For example, in the process of broadcasting, a certain film is favored by people in various regions of the country. TV stations or Internet media companies purchase the exclusive broadcasting rights and put them into a certain website for paid viewing. The number of subscribers can skyrocket and reach a large magnitude within several months. Based on the "viewing behavior" analysis of these subscribers, the Internet company accurately positions the audience type of this genre and made targeted predictions on the developing trend of its future popular films. Therefore, portrait research on film and television audiences is a significant measure for film and television production in terms of big data context in the future. The following figure (Figure 3) shows the viewing chart of each video website in 2017.

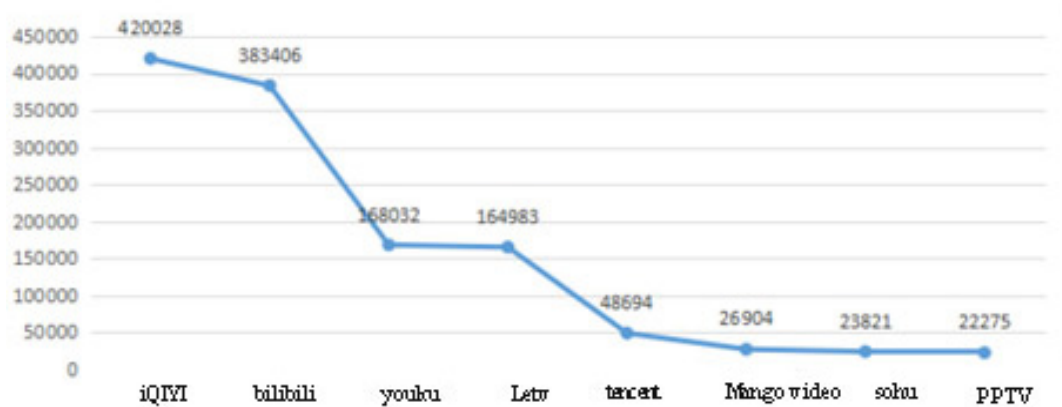


Figure 3. Ratings chart for each video website, 2017

5. The Value of Big Data in Film and Television Production

With the increasing demand for film and television by the public, the funding invested by the companies in the film and television production process is also increasing day by day. Whether the produced films are popular and whether they can obtain considerable profits have become a very important factor during the film and television production process. Therefore, it is necessary to make the most of the advantages of big data to effectively conduct proactive risk assessment for the film. In general, before initiation of the production, investment prevision and accurate marketing planning schemes should be carried out according to the analysis of big data. While considering the artistry of film and television works, we should also accord great importance to the consideration of the market and the study of commercial value. With the advent of intellectual property era, the film and television works adapted from online novels have become a heated creation pinnacle in the industry. Therefore, it is essential to select actors and scripts according to the preferences of specific groups. With the development of big data, film and television production should change the previous blind approach, actively integrate into the market and conform to the needs of contemporary world to produce film and television works with high quality.

Recently films and TV series such as Tale of Yanxi Palace and The Story of Ming Lan exemplify the effective utilization of big data analysis approach. Through complex analysis and statistics of relevant data, not only do they solve the problem of advertisement implantation in movies and TV series, but they also draw people's attention while retaining recognition of advertisements. Not only that, these hot TV dramas are also accompanied by news ranking and network hot spots and other contents to promote, which greatly highlights the topic of the works.

6. Conclusion

With the maturity of Internet information and technology, the media channels for the public to receive information are becoming more and more extensive. The use of various electronic devices, mobile terminals in particular, makes the transmission and sharing of data ubiquitous and incessant. Thus, big data begins to present a trend of rapid growth. In the social background characterized by a certain time, only by breaking the original frame set of thinking, effectively using big data for analysis and positioning, and combining the development of the times, can we ensure the long-term development of film and television production in the future.

References

- [1]. Yang Li, Bing Wan. Discussion and Practice of Big-data-oriented Film and Television Production [J]. Film and Television Production, 2016(7):87-89.

- [2]. Fengyu Zhang, Zhongtian Wei, Chuili Hu. Research on the Operation Mode of "Internet+" Film and Television Production [J]. *Popular Literature and Art*, 2018, No.435(09):162-163.
- [3]. Likun Yang, Yue Chen, Yang Hu. Discussion on Reform of Teaching Mode of "Film and Television Late Creation" Course in Art Colleges and Universities- Research on Practical Teaching of Micro-film Creation [J]. *Science and Education Guide: Electronic Edition*, 2013(27):91-91.
- [4]. Jun bai, Siyi Liang. Research on the Training Mode of Practical Film and Television Post-production Talents [J]. *Journal of Jilin Institute of Education*, 2014(4):96-97.