

# Media Production Innovation Based on Big Data in the Era of Media Convergence

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## Abstract

**With the continuous development of Internet technology, the era of big data will follow, and it provides new opportunities for media convergence. Big data is gradually changing our work and life, which has a huge impact on paper media, radio and television media, and online media. This paper explores the traditional media such as radio, newspapers, and television through the analysis of the meaning and characteristics of big data, explore innovative ways to integrate traditional media such as radio, newspapers and television with new media. This paper explores media production innovation based on big data in the era of media convergence.**

## Keywords

**Media convergence, big data, media, innovation.**

## 1. Introduction

With the continuous deepening of computer network technology, the industrial structure and market environment of the media industry are changing. This paper mainly analyzes that media convergence is faced with many challenges based on big data; media convergence has many innovative mode under the background of big data, which promote the improvement of the media industry.

## 2. The Concept and Characteristics of the Era of Big Data

The term big data first appeared in a book by futurist Toffler, who vividly described the era of big data as the beginning of the third wave, and was later proposed by the British professor Victor in "Big Data: A Revolution That Will Transform How We Live, Work, and Think", he asserted in the book that the emergence of big data marks the arrival of a new era. At present, the term big data is widely used. The big data is a collection of large amounts of data. The big data has the following four characteristics in comparison with traditional databases. The first is that the data scale of big data is large, namely the volume of big data is large, it is no longer the traditional small-scale sampling statistics, and it will collect comprehensive and complete data. The second is that there are many types, namely the big data contains image, text, audio and other forms. The third is the low value density; generally speaking, the level of value density is inversely proportional to the total amount of data. For example, valuable online video may be a few seconds in some times. The fourth point is the fast processing speed, there is a huge amount of data, and people can get high-value information in various types. The above are the notable features of big data; it is precisely because of the use of these features that big data are widely used in various fields.

Big data cannot be captured, managed, and processed with conventional software tools within a certain time frame; which requires new processing modes to have stronger decision-making power, insight, and process optimization capacity, high growth rates, and diverse information

assets. The collection and processing of big data cannot use conventional tool, but need new tools with cloud computing processing mode to solve the problem of large data scale. Big data exists as an information asset and has the role to provide basis and process optimization for decision-making. Precisely because the big data is information asset, it navigates the development direction of for the media convergence. The foundation of the era of big data is the rapid development of Internet technology. With the development of the Internet, the information generated on the Internet has increased dramatically, and the influence of data has also increased sharply. In order to process an enormous amount of information, cloud computing has emerged as the times require. Advanced concepts such as the Internet of things and smart cities have gradually verified that the era of big data has arrived. Because big data is a relatively new thing, there is no consistent conclusion about its basic definition, but one thing is certain, big data will have a profound influence on people's lives and work.

### **3. The Concept and Modes of Media Convergence**

Media convergence is that various media present the trend of multi-functional integration; which is first proposed by Nicholas Negroponte. Although there is no universally accepted definition of media convergence in the academic world, the factors involved in the definition are basically the same, and these factors constitute the modes of media convergence, namely media technology integration, media content integration, and media organization management integration. With the advent of the era of big data and the application of cloud computing, these emerging things have given media convergence a deeper meaning, and there is an urgent need for innovative modes in media convergence.

### **4. The Challenge of Media Convergence to Traditional Media Industry**

In the information era, although the three traditional departments: broadcast and television, telecommunications, and publishing houses all are engaged in information services, each department has its own foundation and technology, and has special platform and receiving terminal, and provides information generation, transmission and reception services, these three departments are different from the industrial departments, they have clear industrial boundaries among each other.

#### **4.1. Media Convergence Changes the Environment of Media Market, and the Rules of Traditional Media Are Faced with Challenge**

First, media convergence has increased market competition among media industries, and traditional media has gradually disappeared from the market. On the one hand, there are big differences in the comparison of technology, there is no obvious competition among the original telecommunications and each sub-medium, but in the process of industrial convergence; all industries have the same platform and foundation, and provide consumers with many similar products, so competition occurs. On the other hand, horizontal integration turn into fragmented market structure in structure, the monopoly of traditional media in the market is very high, the market competition is intensifying, the market structure has gradually weakened in the monopoly of the media industry, and moreover, the scarcity of digital technology occurs fundamentally, so the rules of traditional media will change.

#### **4.2. The Implementation of Outdated Rules in the Media Industry After Media Convergence Will Lead to Rule Duplication**

In the traditional media industry, each sub-medium has a clear industry boundary, its contents needs to depend on the carrier, and the business is relatively single, there will be no conflicts in the market for the same business. But in the process of industrial integration, these

businesses are divided into two categories. One is that the business which has some connections with traditional industries from the outside, such as mobile phone newspapers, Internet TV, etc.; the other is a new business that is not related to traditional industries, such as Weibo, WeChat.

## **5. Innovation Based on Media Convergence in the Era of Big Data**

### **5.1. Technological Innovation of Media Convergence**

Media convergence is formed on the basis of a series of scientific and technological developments; therefore, media technology integration is the foundation of media convergence. According to the flow of information transmission, the technical level of the media can be considered from the signal sending end, the transmission pipeline and the receiving terminal. The sending end of the signal mainly is the technical equipment for collecting information and making programs. In the era of big data, the scale of data is huge, there are many types, and the value density is relatively low, so there are higher requirements for processing speed. Whether it is paper media or radio and television, it is necessary to achieve integration with the Internet, build a platform for information sharing, and realize rapid data transmission and sharing. The signal transmission channel mainly is the technical carrier for transmitting information, such as the Internet and Internet code, WeChat, Weibo, digital newspaper and other technical applications for transmitting information. The application of these new technologies mainly relies on mobile communication equipment, the upgrade of mobile communication equipment and the integration of applications, which can achieve the integration of media technology to a certain extent. The signal receiving terminal is the technical equipment used to receive information, such as PC, smart phone, digital TV, and tablet computer. The receiving information terminal in the era of big data is no longer the era of single screen, but the era of multi-screen, however, under the impact of the era of big data, multi-screen data needs to transform to cross-screen data.

### **5.2. Content Innovation of Media Convergence**

Media convergence needs to achieve a three-dimensional communication effect, which means the integration of media contents and the three-dimensional effect, so the content integration of media is the goal of media convergence. The integration of media content is to achieve the sharing of resources such as text, images, audio and data. However, under the influence of the era of big data, the integration of these information carriers is no longer a simple superposition, and it is necessary to use data resources for integration. I have to admit that the main basis for the long-term development of the program is ratings, and big data provides the basis for real-time monitoring of ratings. Whether it is before the broadcast of the integration program, during the broadcast of the integration program, or after the broadcast of the integration program, the data presentation and effect evaluation are all affected by big data to a certain extent. Before broadcasting, big data provides a basis for building platform for multimedia integration. For example, when a program is broadcast, it is necessary to consider not only its audience on TV, but also the audience on the network. At the time of broadcasting, big data is the basis for the selection of "titles" for the program, these titles here are broad, and can be the modification of the plot, the choice of topics, etc., such as the current Korean dramas, reality TV shows in China, etc., the program group can use the Internet to monitor the audience's response, understand the audience's ideas and expectations of the current program, in fact, this is also the integration of the Internet and TV media. After the broadcast, the original ratings monitoring has been unable to meet the evaluation mechanism of the multi-screen era, but big data can take into account the effects of TV programs, network playback, new media forwarding, and e-commerce sales.

### 5.3. Organization Management Innovation of Media Convergence

The organization management of media convergence needs to break the traditional layout of media; the integration of media organization management methods is formed based on the integration of multimedia talents. The advancement of technology and the diversified needs of the audience have caused the emergence of multimedia talents. On the basis of the integration of big data media, an all-media organization management method emerges as the times require. The all-media organization form is that the reporter inputs the collected information materials such as text, pictures, audio, and video into the all-media database, different media and departments can select the required materials for planning and editing according to the purpose of the report. Reporters originally belonged to different departments, but they should act in a unified way and work together in the same topic. In addition, there are cross-media cooperation, such as the integration of TV stations and websites, the integration of newspapers and websites, the integration of radio and websites, and so on. The focus of the integration of business methods is to break the single advertising business income, use new technologies to systematically control the audience, understand the audience's needs, and carry out accurate marketing, and big data affects the organization's business integration to a certain extent, and provides data support for its development.

## 6. Innovative Ways of Media Convergence

With the continuous development of new media, the traditional media environment is gradually changing, but this does not mean that the traditional media means have no value. On the contrary, we will be in an environment where new and old media coexist for a long time, in this special media environment, how to achieve the integration of media is an important way to optimize the media environment and enhance the vitality of traditional media. Under the background of big data, the value and content of communication between new and old media are more intuitive and visible; therefore, the data models are used to promote media integration and realizing media innovation is an inevitable choice for the common development of different media methods. Under the background of big data, we can analyze the innovative ways of media integration from the following aspects:

With the advent of the age of online media, paper media as a representative traditional media, which has suffered the most impact, and the closure of newspapers and newspaper offices in various regions has confirmed this point. Some media people who were originally engaged in the newspaper industry say paper media is in trouble; they believe that the development of electronic media is the end of paper media. However, paper media is far from exiting the stage of history under the background of media convergence; it still has certain development advantages under the impact of new media. Based on this, we are in the process of innovating media integration, we should pay attention to the integration of paper media resources, integrate scattered paper media into a more centralized media organization, and use resource advantages to explore new development paths; on the other hand, focus on cooperation with network resources and use the authority of paper media to explore the development of electronic newspapers and periodicals, in order to achieve information sharing among different media channels, thereby injecting new vitality into the development of paper media. With the promotion of the integration of the three networks in our country, the paper media is gradually moving towards perfect transformation with newspaper-network linkage as the mainstay. Then, in the era of big data with cloud computing as the basis for mass storage, and the newspaper integration and resources optimization are used to develop newspaper technology platforms, then paper media will obtain further improvement and integration.

TV media is the most dominant form of media in traditional media, but with the development of online media, the advantages of TV media are gradually lost, the ratings of TV programs have

declined, and the reality of the declining advertising revenue has also made some TV stations, especially local TV stations hard to live through. In view of this, under the background of media convergence, media people should focus on using big data to analyze the value of TV media, and change TV programs based on changes in TV program ratings, viewing time, audience characteristics, and other information to give full play to the advantages of TV media. In addition, the "marriage" of TV media and online media should also be realized. For example, the online media such as the official TV live broadcast platform, WeChat official account, and official Weibo are used to expand the audience of TV programs; enrich the choice of TV viewers. The strong image sense and timeliness have always been the advantages of TV media, with the development of the Internet, the ratings and advertising volume are decreasing, and the trend of online media is unstoppable. This has a lot to do with the speed of video websites and the improvement of rich contents and image texture. Many scholars believe that under the development of big data as the background of the times, the impact of television media is the greatest. Therefore, TV media seeks to integrate and develop with online media, which is an urgent need for TV media today.

With the popularity of mobile smart devices, network media has become more convenient. In an open network environment, various new media methods are also constantly developing. However, in the development of online media, there are shortcomings of "eager for quick success and instant benefits", it also leads to the problem that the audience's trust for online media is not high. In allusion to this point, in media integration, relevant departments should pay attention to creating a new media environment, improving legislation, strengthening the regulation of we-media, and avoiding the widespread dissemination of false information in order to continuously improve the quality of online media communication. Today, Internet technology is very developed, smartphones and mobile Internet can be widely used, and even a great change in people's reading, leisure entertainment and lifestyle. Media convergence that takes Internet media as the basic condition will be paid more and more attention. Therefore, based on the era of big data, whoever seizes the online media first seizes the opportunity, and can grasp the media market, the highest point of success now.

While big data improves the traditional media environment, it also provides a new way for the integration of new and old media, and big data, cloud computing and other information technology conditions are used to build a media convergence environment with strong alliance, platform aggregation is the main trend of new media development. However, from the perspective of current media communication effects, traditional media must keep pace with the times. In this regard, we must use the massive data generated by newspapers, televisions, and portals from the perspective of media integration to expand the coverage of media, and then lay a new opportunity for media integration and innovative development.

## 7. Conclusion

The reconstruction of the media industry under the background of big data will bring us different perspectives, and it is also the role of media convergence in practice. In the future, it will be a data-driven world, due to the existence of the data economy, society has undergone tremendous changes. The innovation in the media industry is inevitable trend in the era of media Convergence.

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