Impact of digital technology and internet to film industry

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Abstract. With computer technology development, film production changes a lot. The film new technical revolution has been brought because of the digital technology application. The film art development also has been injected new vitality. The film industry is restructured and developed with huge room because of integration of internet and film industry. The combination of internet and technology can play an important part in relevant industry.

1. Introduction

Film is the combination of scientific technique and the literature and art. Film industry development relies on technology revolution very much. Technology leading plays an important part in film industry history.

From last century, a series new digital technology like computer graphics technology, digital audio synthesis technology, 3D technology, digital processing technology, electronic digital information technology, 3D animation, virtual technology and all digital film including shooting, downloading and showing etc. bring the audience incredible three-dimensional enjoyment and new audio-visual experience. The ways of film production, film distribution and film storage change a lot. An unprecedented audio-visual spectacle is created on film range, nature and expressiveness. The comprehensive application of digital technology is the 3rd revolution after from silence to sound and from black and white to color in film industry.

With internet widely using and fast growing, film industry developed in unbelievable speed. In China film industry has covered more than 100 years’ road abroad in just a few decades. The detail can be analyzed in following part.

2. Digital technology with film industry

Digital technology is engine of film industry. Digital wave leads to the combination of film production and computer technology [1]. The revolutionary change is happened in film production process and audio visual effect. Thus the expression of film is enriched greatly.

2.1. Positive impact of digital technology

Digital technology flooding in film production leads to new energy to all film art development. The detail can be described as below several points.
2.1.1. *Digital technology impels the appearing of new movie style and film type.* With emergence and maturity of the different types of film like disaster, cartoon and science fiction etc., the film world of imaginary could be really felt. It is lofty, mysterious and unbelievable.

2.1.2. *Digital technology enriches the tools of film including creation, distribution and editing.* Digital technology leads to the digitization of film creating. The computer technology needs to be used in the process of early creation, actual shooting and post-production. The traditional film shooting is gradually changed through massive, imaginative and realistic digital technology.

2.1.3. *Digital technology enriches film distribution and changes viewing habit of audience.* The development of digital technology changes playback carrier and types. Single film projection mode has been broken. The development of film digitalization urges to the diversified and personalized evolution of movie distribution ways.

2.2. *Digital technology leads to the revolution of film*

Digital technology has totally changed our original things related to movie and TV like film, tape CD and etc. The ways including information collecting, processing, transferring and displaying etc. have been changed a lot. So has the performance of art works.

2.2.1. *Miracle of film is created by new material and new technique of digital technology.* When digital technology is used, not only real world can be created but also dream world like virtual reality and future world can be set up. What we have seen actually is directed and designed [2].

2.2.2. *Digital technology enriches the creating methods.* Film art is the extension of visual art. Images and pictures are the main expressive elements.

Digital technology reforms the film production process. The application of digital technology improves the film production including speed, efficiency and flexibility greatly. Digital HD camera can get rid of the method of film production of movie [3].

Digital technology provides new creative space to film art. The function of camera has surpassed people’s eyes because of computerized camera application. It can not only find invisible perspective but also shoot things people could not see. Thus more spectacles are supplied [4].

In a word, a prospect can be displayed through computer. The computer can work better and more perfect than traditional method. When traditional method could not work, the computer can still deliver outstanding performance.

2.2.3. *Digitalization has opened up a new world for film industry.* TV had made a huge influence to film industry. It is difficult to attract audience to go back to cinema through traditional film production.

In order to improve the situation, many so-called creations like stereoscopic film, panoramic film and wide-screen film etc. had been used in the past. However, the result was not ideal.

With digital technology development, everything has changed. It brings up not only spectacles but also box office. The global box office of top 10 films is showed in Table 1 [5].

From Table 1, the influence of digital technology can be easily found. The impact of digital technology has surpassed traditional film production a lot.

2.2.4. *Digital technology brings a new exploration to the essence of film.* The visual effect of digital technology is no longer simple reality. The spectacles made or visual lies are absolutely not traditional concept of truth [6].

The truth reflected by traditional film and virtual reality made by digital technology need to be taken in deep consideration.

3. **Influence of internet development to film industry**

Internet development plays very important part in film industry. In China, it takes only a few decades to complete the journey of 100 years abroad in film industry [7].
Table 1. Top 10 global box office.

| Rank | Film Name                  | Box Office (Billion USD) | Production Country       | Year |
|------|---------------------------|--------------------------|--------------------------|------|
| 1    | Avatar                    | 2.78                     | USA/England              | 2009 |
| 2    | Titanic                   | 2.19                     | USA                      | 1997 |
| 3    | Star Wars: The Force Awakens | 2.07                  | USA                      | 2015 |
| 4    | Jurassic Park             | 1.67                     | USA/China                | 2015 |
| 5    | Avengers                  | 1.52                     | USA                      | 2012 |
| 6    | Fast & Furious 7          | 1.52                     | USA/China/Japan          | 2015 |
| 7    | Avengers 2                | 1.41                     | USA                      | 2015 |
| 8    | Harry Potter              | 1.33                     | USA/England              | 2011 |
| 9    | Frozen                    | 1.27                     | USA                      | 2013 |
| 10   | Iron Man 3                | 1.22                     | USA/China                | 2013 |

3.1. Access to internet capital breaking the traditional movie thinking

Internet capital complicates and diversifies the market of film industry. The situation happens in many aspects.

For example, many different distribution ways can be derived from internet capital joining. In the past the film distribution mainly relies on sole wide screen. However, today the distribution channels can cover online and offline. Besides theaters releasing, the other ways including video on demand (VOD), internet movie rental and Bit Torrent etc. are created. The distribution diversity reflects the power of relevant capital.

China top 10 box office film is showed in Table 2 [8]. These films are all produced in past 3 years. In China the period is the time internet fast growing. The influence of internet to film industry can be easily found.

Table 2. Top 10 China box office.

| Rank | Film Name                  | Box Office (Billion RMB) | Year |
|------|---------------------------|--------------------------|------|
| 1    | Wolf Warriors 2           | 5.68                     | 2017 |
| 2    | Ne Zha                    | 4.97                     | 2019 |
| 3    | The Wandering World       | 4.65                     | 2019 |
| 4    | Avengers: Endgame         | 4.24                     | 2019 |
| 5    | Operation Red Sea         | 3.65                     | 2018 |
| 6    | Detective Chinatown 2     | 3.40                     | 2018 |
| 7    | Mermaids                  | 3.39                     | 2016 |
| 8    | Dying To Survive          | 3.10                     | 2018 |
| 9    | Motherland and Me         | 2.74                     | 2019 |
| 10   | The Captain               | 2.67                     | 2019 |

3.2. Traditional thinking of film industry is broken down because of internet

Internet has infiltrated upstream and downstream of film industry. The added value has been paid more attention. The methods including E-commerce drainage, content IP and users operation etc. display internet thinking very much.
Though internet has permeated many aspects of film industry, eventually it is a tool to develop film industry. This is because that the essence of film industry is content.

3.3. Big data influence to film industry

Big data application will be the trend to future film industry development. The analysis of big data of audience will affect future film standard production. Based on big data of audience like their psychology, preference, click situation and evaluation etc., the film can be produced easily to satisfy and meet the taste of audience. Thus the film can easily lead to success [9].

Both the value and regulation and future trend and analysis can be obtained through big data. In future, the development of film industry will be rounded core IP resources to build internet plus film ecosystem including many products like game, e-commerce and animation etc.

4. Conclusion

Both digital technology and internet bring about earth shaking changes to film industry. The revolution has not ended.

With further digital technology and internet cooperation application, it has caused a worldwide sensation and had a great impact on the revolution of movie special effects and film concepts. However, both digital technology and internet are tools to develop film industry. The essence of film industry development is to make of use of these tools to produce best films.

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