

# STEERING THROUGH THE DIGITAL DELUGE: AN EXAMINATION OF SHANXI RADIO AND TELEVISION STATION'S TRANSITION IN THE AGE OF MEDIA CONVERGENCE

Zhiqiang Jia<sup>1</sup>, Shazleen Binti Mohamed<sup>2</sup> & Muhammad Hakimi Tew Abdullah<sup>3</sup>  
*School of Communication and Media, College Of Computing, Informatics And Media,  
Universiti Teknologi MARA, 40450 Shah Alam, Malaysia<sup>1,2</sup>  
Shanxi Radio and Television Station, 030001 Taiyuan, China<sup>1</sup>  
Universiti Teknologi MARA, 71300 Negeri Sembilan, Malaysia<sup>3</sup>  
[muhammad\\_hakimi@uitm.edu.my](mailto:muhammad_hakimi@uitm.edu.my)<sup>3</sup>*

Received Date: 30<sup>th</sup> March 2023 Accepted Date: 20<sup>th</sup> October 2023 Published Date: 31<sup>st</sup> October 2023

## Abstract

*This study explores the transformative impact of technological advancements on the television industry in China, using Shanxi Radio and Television Station as a case study. Through in-depth interviews with twelve professionals across the television industry, the researcher identified the significant influence of technology on content creation, distribution, and audience engagement. The rise of online streaming services, social media platforms, and new media technologies have revolutionized the television landscape, promoting personalized and interactive content. However, the study also reveals notable challenges, including potential erosion of audience trust, declines in critical thinking abilities, and the risk of market monopolization. The findings provide invaluable insights for traditional broadcasters navigating digital transitions, emphasizing the need for innovation, adaptation, and critical engagement with the issues arising from new media technologies.*

**Keywords:** *Media Convergence, Digital Transition, Television Industry, Shanxi Radio and Television Station, Audience Engagement, New Media Technologies.*

## 1.0 Introduction

Television technology has seen remarkable advancements over the last few decades, significantly influencing how programming is created, disseminated, and consumed [1]. These developments have fundamentally transformed the media landscape, posing unique challenges and opportunities for traditional broadcasters. One such case is the Shanxi Radio and Television Station in China, which is situated at the crossroads of this digital evolution. Shanxi Radio and Television Station was chosen as the focus due to its representation of traditional broadcasters in China, providing valuable insights for the industry. The purpose of this study is to explore the impact of television technology developments on the Chinese television industry, specifically focusing on their influence on content creation, production processes, and audience engagement.

From the introduction of color television in the late 1970s, through the proliferation of cable and satellite television, to the current dominance of online streaming services and new media platforms such as WeChat and Weibo, the television industry in China has undergone significant transformations. These changes have not only disrupted the traditional television environment but

have also spurred new opportunities for content creators, industry professionals, and audiences alike.

However, the digital revolution and media convergence have also posed considerable challenges to traditional broadcasters like Shanxi Radio and Television Station. As a conventional broadcaster, the station had to navigate a complex transition, adjusting its strategies and operations to stay relevant in this rapidly evolving digital age. This study aims to understand how Shanxi Radio and Television Station managed this transition and what lessons can be gleaned from its experience.

This paper will provide an in-depth exploration of these themes, drawing on interviews with professionals from diverse backgrounds within the industry. By delving into their insights, this study hopes to gain a comprehensive understanding of the opportunities and challenges brought about by new media technology developments in China's television landscape. The findings could provide valuable lessons for other traditional broadcasters facing a similar transition and contribute to the broader understanding of media convergence.

## **2.0 Literature Review**

Media convergence has been a widely researched topic in recent years, as it plays a significant role in reshaping the landscape of traditional television programming. Dwyer [2] has explored the development of media convergence in traditional television industry and its implications for the future of the industry.

Mittell [1] has examined the impact of television technology advancements on the creation, distribution, and consumption of television content. As seen in China's television industry, the introduction of new media platforms like WeChat and Weibo has led to significant changes in how programming is made and viewed. This can also be seen in the rise of online streaming services, which have disrupted traditional television viewing habits.

Wang [3] has conducted an in-depth study on the transformation of China's television industry in the age of media convergence. The research highlights the challenges and opportunities that media convergence presents for China's television industry, including the need for innovation, adaptation, and a focus on high-quality content to stay relevant and competitive.

The role of new media technology in enhancing audience engagement has been a growing area of research in recent years. In China's television industry, studies like those by Zhang and Lin [4] have shown that new media technology has led to an increased focus on interactive communication and audience engagement.

Guo, Gu and Zhang [5] believe that as media convergence accelerates, many traditional media in China will be challenged by new media. They have begun to evolve into a new TV viewing mode of "TV screen + PC screen + smart mobile terminal". The public has more choices and more specific requirements for television programming in this age of information explosion. They examine how TV production and profit models have changed in China during the era of media convergence, then show how Chinese audiences' preferences have changed and recommend ways for media practitioners to improve TV shows.

The TV media function determines the typical TV program format. Cross-screen convergence necessitates the organic integration of diverse media functions, and the expansion of media functions will lead to the emergence of new forms of TV programs. According to Ye [6], cross-

screen TV program convergence has become an unavoidable choice for the convergence and expansion of the TV industry and the Internet. Cross-screen convergence does not merely refer to the fact that programs are aired on multiple screens but also to the extent to which they can achieve complementary advantages among various media. Cross-screen convergence demands the organic integration of diverse media functions, and the expansion of media functions will undoubtedly give birth to new types of television programming.

The existing literature has provided a snapshot of the current state of media convergence and its impact on the Chinese television industry. However, there is a need for research that explores potential future trends and innovations, both in terms of technology and content creation, which could shape the industry in the coming years. By addressing these research gaps and expanding the scope of existing studies, the researcher can contribute to a more comprehensive understanding of the Chinese television industry's transformation in the era of media convergence. This, in turn, can inform decision-making and strategic planning for industry stakeholders, help identify new opportunities for innovation and growth, and ultimately enhance the quality and relevance of television programming for audiences in China and beyond.

### **3.0 Methodology**

A qualitative research methodology is used in carrying out this research. The main reason for undertaking this method is the needs of the research problem that must be analyzed based on the informants' perspectives. Such an approach does not need any testing neither of hypothesis nor to measure any variables. The researcher is more interested in research based on the informants' personal experiences and perspectives.

#### **3.1 In-Depth Interview**

An interview is a standard qualitative research method in which the researcher collects data from participants directly [7]. In examining the method of choice for comprehending social reality, Minichiello, Aroni and Hays [8] viewed an in-depth interview as an appropriate method for obtaining access to the individual's words and perceptions. He proposed that face-to-face engagement during in-depth interviews contributes to the researcher's comprehension of human experiences as stated by the actor and understood by the researcher.

Burgess [9] and Lofland and Lofland [10] define an in-depth interview as a type of conversation. In a study using an in-depth interview method of data collection, no more than 10-15 people are interviewed individually, making it one of the most effective forms of data collection.

An in-depth interview that serves as a moderator guide is similar to a journalistic interview [11]. Therefore, in this study, the researcher opts for in-depth interview in order to undertake the study. The researcher has worked as a news interviewer and host for 15 years. The researcher has extensive experience in informant selection, question design, and interview content, another important reason the researcher chose in-depth interviews as data collection methods.

### 3.2 Selecting the Participants

Criterion-based sampling is used in a phenomenological study to select informants who meet the following criteria: (a) they have experienced the phenomenon under study, and (b) they can articulate their real-life experiences [12]. Apart from the above criteria, the informants should meet the following requirements:

- Must be 45 years old and above;
- Regardless of ethnic background;
- Regardless of gender;
- Senior TV program producer;
- Senior officials who are still in service in television broadcasting;
- Retired senior officials from television broadcasting;
- Individuals who have contributed to the development of television broadcasting;
- Experts who have contributed a considerable number of years towards the development of television broadcasting;
- Policymakers who should be able to relate the circumstances that have shaped the broadcasting landscape.

The informants selected may either be male or female, as the researcher believes that these informants can provide answers that are relevant to the research. The last deciding factor in selecting informants for this research is that they must participate willingly and voluntarily. This criterion is essential for conducting ethical research, and the informant must not be forced into participating in an in-depth interview. The informants should also give frank opinions regarding the research objectives, and such perceptions must be from their perspectives.

### 3.3 Unit of Analysis

The researcher believes that the selected informants who satisfy the above criteria can provide in-depth personal real-life experiences. The researcher divided the informants into three groups in terms of Managerial, Above the line and Below the line:

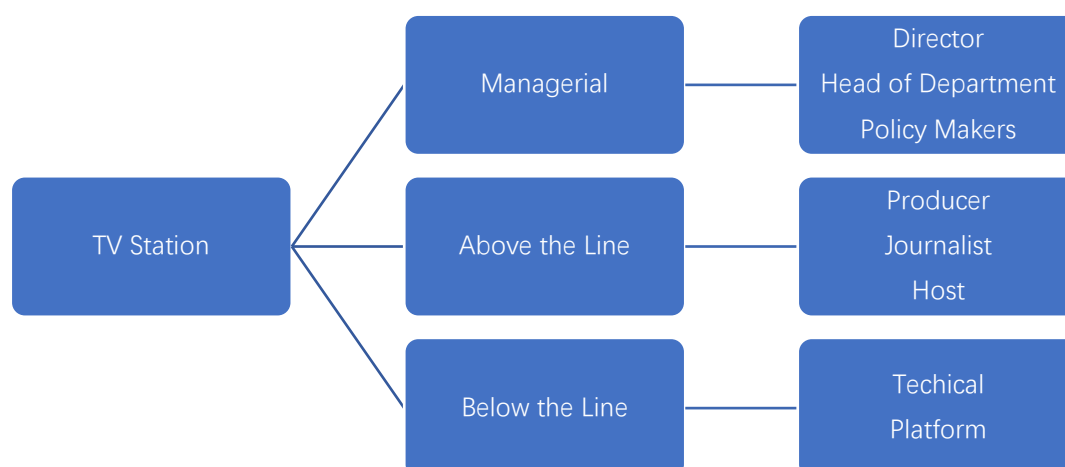


Figure 1: Research Unit

## 4.0 Findings

### 4.1 Technological Advancements in TV Production

The integration of new media technologies, such as 3D animation, virtual imaging, VR, AR, satellite remote sensing, geographic information mapping, AI hosts, 5G communication technology, and interactive TV functions, has broadened the possibilities for TV program production and dissemination. These increasing presence of new media technologies in traditional media, elevating program quality, and facilitating faster, smoother content dissemination [13].

The growing use of new media technology in television production, including high-definition cameras, robot-controlled cameras, and integration of TV program production resources, has expanded the reach of programs and facilitated the development of new communication channels. However, integrating new media technologies into traditional media production also has its limits, such as high costs and limited applications [14].

The researcher's study on technological advancements in TV production revealed four key themes: (I) The variety of TV program production equipment increased, (II) New media technology application scenarios increased, (III) New media technology is widely used in television production, (IV) TV program receiving terminal diversification.

#### 4.1.1 The variety of TV program production equipment increased

The changing role of digital technology in media production and its impact on the audience experience is profound [15]. The findings highlight the significant impact of digital technology, virtual technology, animation, and big data analysis on improving the efficiency and quality of program production. This increased use of technology in TV program production has enhanced the audience's viewing experience.

The introduction of new media technologies like 3D animation, virtual imaging, VR, and AR has broadened the possibilities for TV program production, which is consistent with the research conducted by Bailenson [16] who discussed the transformative potential of immersive technologies in media production. The continuous upgrade of TV production equipment, including cameras, recording equipment, and camcorders, has contributed to higher resolution and advanced functions, elevating program quality [13].

The interview findings reveal that there has been a significant increase in the variety of TV program production equipment:

*“Some improvements in camera technology, such as panoramic shots, and the use of drones. It's hard to imagine how unmanned aerial vehicles could ever be used on television, but now they are.” (Informant#2)*

*“In the past, our TV station only had a small studio of 70 square meters, but now the area of the news studio has increased to 600 square meters, and it is a high-definition standard all-media studio, supporting the use of virtual technology to produce programs, such a change, I am deeply aware of.” (Informant#4)*

*“We often use some digital technology, virtual technology, animation, big data analysis and other technologies, to bring a very beautiful experience to the audience watching TV, to bring the audience this very good visual enjoyment.”*  
(Informant#6)

*“The recent CCTV broadcast of “Ten Years of Decoding”, which presents a satellite view of aerial photography by drones, opens up a whole new Angle of news media coverage when combined with big data presented on studio screens. The variety of TV program production equipment has gradually increased, and new equipment and technology have been introduced constantly, greatly improving the efficiency of program production and program quality.”*  
(Informant#8)

*“In my opinion, many new media technologies, such as 3D animation and virtual imaging technology, can improve the overall visual experience of the program. The video picture has made a great leap forward. The introduction of VR, AR and other new technologies also brings more possibilities for the production of TV programs. The continuous update and development of TV program production equipment provides more technical means for the production of TV programs, but also improves the quality of TV programs and the audience's viewing experience.”* (Informant#5)

*“We use high technology to broadcast TV programs in high definition, such as 4K and 8K. The new digital imaging technology elevates the quality of programs to a higher level. TV production equipment is constantly upgraded, and cameras, recording equipment, camcorders and other equipment have higher resolution and more advanced functions.”* (Informant#9)

#### **4.1.2 New media technology application scenarios increased**

The influence of new media technology on traditional media is powerful [17]. The findings reveal an increasing presence of new media technologies in traditional media, including satellite remote sensing, geographic information mapping, three-dimensional modeling, AI hosts, 5G communication technology, 4K and 8K pictures, new media live broadcasting technology, and interactive TV functions. These technologies enhance the audience's experience by offering realistic, three-dimensional presentations of digital elements, diverse learning resources, and rich entertainment experiences.

The media convergence enabled by these technologies, as described in the interviews, has facilitated more efficient program transmission and faster, smoother content dissemination, thanks to the low latency of 5G communication technology. This finding is consistent with the work of scholars like Napoli [18], who examined the role of media convergence and advanced communication technologies in the evolution of media consumption.

The following informants believe that the new media technology application scenarios increase:

*“In traditional media, the application scenes of some new media technologies increase, such as satellite remote sensing, geographic information mapping, three-dimensional modeling and other big data means, so that boring digital elements can be presented to the audience in a real and three-dimensional way. This is a new visual feeling brought by the development of these new media and Internet.” (Informant#1)*

*“There's no manual operation in the studio when we're recording, we can program the recording equipment and control the camera. In terms of production technology, media convergence is too developed. When the program is transmitted, it can be collected and generated several times at a time, which is what we call the central kitchen.” (Informant#10)*

*“At present, the application of new media technology is flexible, such as AI hosts can replace real people in some programs. The low delay of 5G communication technology makes the program spread faster and more smoothly. 4k and 8k pictures are very realistic, giving the audience a good audio-visual feeling.” (Informant#12)*

*“For example, the participation of new media live broadcasting technology is very good. We also try to have some programs to intersperse the views of some netizens into our programs in real time. This kind of change of application scene is very good. More diverse learning resources can also be provided to students during the COVID-19 pandemic. They can learn from books through TV shows or participate in online teaching through live TV.” (Informant#2)*

*“Nowadays, there are a lot of TVS with interactive functions, allowing the audience to interact with TV programs through the TV screen, such as voting, lottery, answer questions, etc., to provide the audience with a richer entertainment experience.” (Informant#4)*

*“Through the new media technology of TV, TV shopping, TV auction and other forms of e-commerce has been rapidly developed. Viewers can buy products and learn information about products through TV, which is simple and convenient and also saves time.” (Informant#9)*

#### **4.1.3 New media technology is widely used in television production**

The findings highlight the growing use of new media technology in television production, including high-definition cameras, robot-controlled cameras, and the integration of TV program production resources. These technologies, such as big data, digital technology, three-dimensional modeling, virtual technology, and virtual animation, are expected to become even

more widespread and deeply integrated in the future. However, integrating new media technologies into traditional media production also has its limits [19]. Some interviewees raised concerns about the high costs of maintaining electronic equipment and the limited application of certain technologies like AI.

The informants generally agree that:

*“In the earliest traditional media, the camera equipment we used was very heavy, and we often felt tired after a day of shooting. Now, the new camera equipment is small and flexible, and the shooting quality can reach 4k high-definition effect, which provides us with great convenience in program production. Some time ago, we bought a set of camera controlled by robots in the studio of our school. It can be said that the application of new technology is very popular.” (Informant#10)*

*“New media technologies can be said to be very extensive, which can integrate TV program production resources. For example, the central kitchen of our TV station is responsible for absorbing program resources from our TV channels and radio frequencies. Through unified arrangement and distribution, labor costs can be saved scientifically, and different types of programs can be arranged, which greatly facilitates the production of TV programs.” (Informant#11)*

*“In the future, with the development of science and technology and the continuous improvement of Internet technology, I think the application and popularization of new media technology in traditional TV stations will be more and more extensive and in-depth. With the application of this technology, our large and small screens will bring better experience to the audience.” (Informant#2)*

#### **4.1.4 TV program receiving terminal diversification**

The interview findings underscore the increasing variety of platforms available for program broadcast, such as mobile phones, IPTV, mobile TV terminals, and tablet computers, alongside traditional media channels like paper, radio, and television. These new media receiving terminals have expanded the reach of programs and facilitated the development of new communication channels. García-Perdomo [20] has also highlighting the complexities of organizational arrangements between traditional and online media and emphasizing the importance of adaptation to the digital era.

New media technology plays a great role in improving the quality of TV programs [21]. The application of new technologies, such as 4K and 8K high-definition picture quality, has enhanced the viewing experience, making both big and small screen programs more enjoyable for audiences. In the era of media convergence, programs can be distributed on multiple terminals, enabling wider audiences to receive them. Mobile TV and internet TV are popular among audiences due to their convenience and personalized and diversified programs and services.



The informants suggest that there has been a diversification of TV program receiving terminals:

*“Receiving terminal, from a piece of paper in the past, a radio, a television, actually now like this we have in addition to these, there are mainly mobile phones, IPTV, mobile TV terminals, but also tablet computers.” (Informant#1)*

*“New media technology has increased the number of platforms for program broadcast. WeChat, Weibo and client are the most common communication platforms. Now basically all traditional media are developing new communication channels.” (Informant#12)*

*“Whether media practitioners or audiences, they all like this new technology, because the application of this technology makes the big screen and small screen programs better, especially the big screen new media technology, 4K, 8K high-definition picture quality will make the picture clearer, better color restoration. Digital TV has gradually become the mainstream way to receive TV programs. Digital TV has the advantages of high definition, multi-channel sound effect and so on, which can provide better viewing experience.” (Informant#4)*

*“In the era of media convergence, the content produced by us can be distributed on multiple platforms. Specifically, it means that a program produced once can be re-edited and broadcast several times on different platforms. In this way, the arrival rate of the program is very good, not only covering the traditional TV audience, but also enabling the audience of mobile terminal to receive it. Our programs also spread faster and more efficiently.” (Informant#9)*

*“Mobile TV allows viewers to watch TV programs through mobile phones and tablets, allowing viewers to watch programs anytime and anywhere.” (Informant#2)*

*“Internet TV is now very common, it combines Internet technology with TV technology, can provide more personalized, diversified TV programs and services, audiences like it very much.” (Informant#8)*

## **4.2 Effects of New Media Technology**

The findings emphasize the role of new media technology in improving TV program quality, catering to audience preferences, and fostering engagement. Personalization algorithms and innovative expression techniques have been shown to positively impact content consumption. However, the ease of access to information via new media technology may also have negative effects, such as impairing deep engagement, critical thinking, and the ability to discern true from false news [22]. Furthermore, the accessibility of new media technologies has led to an abundance of low-quality content, drowning out high-quality programming and potentially harming the healthy development of younger audiences [23].

The researcher's study on effects of new media technology revealed four key themes: (V) Improved the quality of the programs, (VI) Increased audience appeal, (VII) New media technology has inevitable disadvantages, (VIII) Television communication content quality

declined.

#### 4.2.1 Improved the quality of the programs

The interview results shed light on the pivotal role of new media technology in the improvement of TV program quality, by emphasizing that meeting the audience's needs and preferences is the key determinant of program quality. This aligns with the research conducted by Hanusch and Tandoc Jr [24], who discuss the transformative influence of new audience feedback mechanisms on journalism culture, underscoring the vital significance of audience feedback in the context of evolving media technology. The findings further highlight the crucial role of audience feedback for TV stations, as it enables them to adapt and enhance their program content based on the ever-changing preferences and expectations of their viewers.

Furthermore, the findings emphasize the significance of 5G technology in boosting the development of new media, catering to audience needs in terms of visual and sensory perception. While innovative visual communication effects, such as three-dimensional animation, can enhance the presentation of abstract information, the content of the program ultimately depends on the producer's creativity and thought process [25].

The informants believe that new media technology can help improve the quality of TV programs by meeting the needs of the audience:

*“It is certain that new media technology can help us improve the quality of TV programs. As long as the new media technology can meet the needs of the audience, the so-called quality does not mean that the program quality is good or bad in the producer's opinion, but that the audience will decide whether the program is a quality program or not.” (Informant#1)*

*“Users are used to writing their opinions on programs in the comment section or bullet screen of programs. Such information can be intuitively seen by TV producers and other users. Such important feedback helps TV stations to improve program content and thus improve program quality.” (Informant#11)*

*“New media technology has certainly improved the quality of TV programs, with more sophisticated production and faster transmission speed, which to a great extent meet the needs of audiences. TV programs can realize real-time review, comment and interaction.” (Informant#12)*

*“The use of new media technology in TV programs makes the content and information of programs clear at a glance, while making abstract numbers easier to understand. For example, to let the audience know the economic changes, it can be presented on the TV screen in the form of three-dimensional animation, which is very intuitive. We use technology to transform traditional television production and improve the quality of programming.” (Informant#4)*

*“New media technology can certainly improve the quality of the program, that is,*

*the visual communication effect of the program has been improved a lot, but at the same time, it does not play a big role in the communication of the program content, the content of the program still depends on the producer's thinking.” (Informant#5)*

*“5G plays an important role in boosting the development of new media. In fact, 5G itself is a simple technology. However, when it comes to media, we call it new media technology and redefine it. New media technology can help improve the quality of our TV programs. Human beings are willing to pursue fresh, exciting and intuitive content. The emergence of new media technology can meet the needs of audiences in terms of vision and sensory perception.” (Informant#7)*

#### **4.2.2 Increased audience appeal**

The new media technology can enhance the appeal of television by providing personalized and interactive content, diversifying expression forms, and fostering audience engagement. Data analysis and intelligent algorithms can tailor content to individual preferences, while technology integration allows for more innovative expression techniques [26]. Furthermore, new media platforms enable interactivity and more open reporting, changing the dynamics between media and audiences. All of these play a key role in increasing audience appeal.

These findings align with previous studies, such as Lee, Hosanagar and Nair [27] who found that personalization algorithms positively impact content consumption. Vanattenhoven and Geerts [26] similarly explored how emerging technologies reshape the television experience. The notion of audience interactivity and shifting roles of media and audiences has been a focal point in media studies, as highlighted by Jenkins and Deuze [28].

The following informants specifically mention that:

*“New media technology is of great use in increasing the audience's attraction. Since it is inconvenient for the audience to watch TV in front of the TV, they will be transferred to the small screen of the mobile phone. Different video products should be made according to the characteristics of the audience. Audiences have the right to watch their favorite programs, so the target audiences of our traditional media should be more clearly positioned.” (Informant#12)*

*“In terms of visual effects, the use of new media technology makes the perspective very unique. New media technology can provide more personalized and customized content and services according to the interests and preferences of the audience through data analysis and intelligent algorithms, so as to increase the audience's satisfaction and loyalty. This increases audience appeal, enhances proximity, and allows viewers to find empathy points from a civilian perspective.” (Informant#2)*

*“Programs broadcast on new media platforms can be interactive. Editors can create them for many times according to messages and comments, and then conduct interviews and dig new topics, thus forming an open topic and more open interview report. Therefore, the roles of media and audiences are changing. The media and the audience can interact, thus increasing the appeal of traditional television.”*

(Informant#4)

*“Better viewing experience, faster transmission speed and more convenient scene access can provide more realistic and immersive visual experience, making the audience feel immersive. The integration brings the personalized experience of TV, which increases the attraction of TV.” (Informant#6)*

*“Technology can give wings to people's thoughts and create more techniques of television expression. It can spread further, it can make the means of television expression more diversified, and make the audience seem more acceptable. This is a very big change, and then increase the appeal of television.” (Informant#8)*

*“New media technology has diversified the expression forms of the program, its innovative expression is more attractive, and its interactive and sensory experience is also higher. I think new media technologies bring transformative things to traditional media.” (Informant#9)*

#### **4.2.3 New media technology has inevitable disadvantages**

The findings suggest that the ease of access to information via new media technology may contribute to a decline in deep engagement, critical thinking, and the ability to discern true from false news. New media technology might also lead to addiction to virtual social networks, neglect of real interpersonal communication, and a decline in abstract thinking, particularly among teenagers [29]. Additionally, the integration of new media technology with traditional TV has altered its nature and the sense of companionship it once provided [30].

These concerns have been explored by various scholars. Carr [22] argued that the internet impairs deep reading and contemplation. Vosoughi, Roy and Aral [31] studied the spread of false news online, highlighting the challenges in discerning accurate information. The interview results echo the concerns of informants regarding the potential negative consequences of new media technology:

*“Now our cost of switching viewers, the cost of switching channels of information has gone down very quickly, and I want to watch it, I don't want to watch it quickly, and that has led to a lot of these short videos. People get information too easily, which leads to a decline in the ability to dig deeply and sustain attention to an issue.” (Informant#1)*

*“The application of new media technology in traditional media also has some problems in practical application. In the era of new media, people may still have misunderstandings about information and news. Information is not equal to news, which makes it more difficult for audiences to judge whether news is true or false. News is authoritative and accurate, so the truth of the information needs to be verified.” (Informant#4)*

*“New media technology can promote social communication and communication to*

*some extent, but it also makes people overly addicted to virtual social networks and neglect the real social interpersonal communication, which is also a huge impact.” (Informant#2)*

*“From a deep level, many things are presented directly and vividly in front of the public, and the audience hardly needs to think. Whatever is shown on TV, the audience will accept it. As time goes by, the ability of abstract thinking will decline, especially for teenagers, which is terrible.” (Informant#5)*

*“New technology is improving the quality of television, but it is also making it less like traditional television. Due to the era of media convergence, new media can do all the content done by traditional TV, and do it well. However, the atmosphere of family sitting in the living room, chatting while watching TV in the past is few now, and the sense of companionship brought by traditional TV is no longer there, which makes me feel a pity.” (Informant#7)*

*“The use of new media technology is easy to be addictive, especially for young people. Being addicted to new media platforms such as social media and online games may lead to a waste of time and excessive consumption of energy, which will affect study and life.” (Informant#6)*

#### **4.2.4 Television communication content quality declined**

The traditional media's focus on market monopolization, competition for viewers, and advertising revenue has led to the broadcast of low-quality entertainment programs, which undermines audience trust. This has caused TV stations to prioritize sensational and vulgar content to attract viewers and advertisers, potentially harming the healthy development of younger audiences [23]. Additionally, the accessibility of new media technologies has led to an abundance of low-quality content, further drowning out high-quality programming [32]. Traditional media might also lose innovation and vitality as they chase internet trends [18]. The high costs and time-consuming nature of producing quality TV programs may further limit producers' abilities to create such content.

The informants suggest that the quality of TV program content has declined:

*“The impact of the quality of the program is actually an indicator of decline. In terms of technology, it is widely used, but in terms of content, it is basically very slow, because from the perspective of traditional mainstream media, monopoly means the erasure of innovation. In order to compete for more viewers and advertising revenue, TV programs may appear the same low-quality entertainment programs, which leads to the decrease of the audience's trust in TV programs.” (Informant#1)*

*“In order to increase audience rating, TV stations may be inclined to broadcast vulgar and eye-catching content without any practical significance, which is often not conducive to the healthy growth of teenagers. However, the purpose of attracting viewers is to obtain higher audience rating and advertising revenue, and*

*some of the contents put the cart before the horse.” (Informant#2)*

*“New media technologies make communication easier, which means it's easier to publish and distribute content, which can easily lead to quality content being swamped by low quality but high volume content. What is really good is less and less visible.” (Informant#12)*

*“Traditional media are easy to be influenced by Internet users and forward some content created by we-media video platforms, which can be understood as “scraping hot spots”. However, as time goes by, traditional media will follow the trend and lose its program innovation and vitality.” (Informant#4)*

*“The disadvantage may be that some innovations are considered as technological innovations, but they are only innovations in form. Such changes focus on the improvement of sensory experience, while ignoring the expression of actual program content. I think the content of the TV program is king always to insist that all external forms are for the service of the content of the program.” (Informant#9)*

*“It takes a lot of money and time to produce a high-quality TV program. However, due to the development of new media technology, the income of TV programs may be affected, and program producers may be limited by money and time, which may lead to a decline in the quality of TV programs.” (Informant#6)*

## **5.0 Discussion**

The findings of this study hold significant implications for other traditional radio and television stations facing similar digital transitions. First and foremost, the research underscores the importance of adaptation in the face of technological advancements and changes in viewer preferences. Stations must be willing to embrace new technologies and platforms, diversifying their content distribution channels beyond traditional mediums. As the study shows, audiences are increasingly turning to mobile phones, IPTV, mobile TV terminals, and tablet computers for content consumption. Ignoring these platforms could limit the potential reach and impact of a station's programming.

Moreover, the research suggests that the integration of data analysis and intelligent algorithms can enhance audience engagement by personalizing content to match individual interests and preferences. This personalized approach to content creation and delivery could be a crucial factor in retaining audiences in an increasingly competitive media landscape. Additionally, the shift towards more interactive and participatory forms of content, facilitated by new media technology, can create a more engaging viewing experience, potentially attracting and retaining a larger audience base.

However, this transition also brings with it some challenges. As the study points out, the ease of access to information can potentially undermine critical thinking abilities and sustained attention. Traditional radio and television stations must therefore consider strategies to promote critical engagement with content, perhaps through interactive features or thought-provoking programming.

Furthermore, the study's findings highlight the risks associated with the proliferation of low-quality content and market monopolization. In the pursuit of viewership and advertising

revenue, stations must ensure they maintain high-quality programming standards to avoid eroding audience trust and damaging their reputation.

## **6.0 Limitations**

Despite the valuable insights provided by this study, it is not without its limitations. The research primarily focused on the case of Shanxi Radio and Television Station, and while the findings provide useful implications for other traditional broadcasters, the specific context and experiences of Shanxi might not be completely applicable to all stations. Each station may face unique challenges and opportunities in their digital transition, influenced by factors such as their regional audience demographics, organizational structure, and resource availability.

Moreover, the study largely relied on in-depth interviews with professionals from various backgrounds. While these interviews provided rich, qualitative insights, they might not fully capture the diversity of experiences and perspectives within the television industry. Further research could benefit from a more comprehensive and diverse data collection approach, incorporating quantitative methods or surveys of a broader participant pool.

Lastly, the rapid pace of technological change means that the media landscape is continually evolving. Although this study provides a snapshot of the current state of the television industry in China, the ongoing developments in new media technology might necessitate continuous research to keep up with these changes and their implications for traditional broadcasters.

## **7.0 Conclusion**

This research investigated the impact of technological advancements on China's television industry, focusing on the digital transition of Shanxi Radio and Television Station in the media convergence era. The study discovered that technology, from color TV to online streaming and social media platforms, reshaped content creation, distribution, and consumption. The integration of new media technology has led to personalized, interactive content, providing new opportunities for traditional broadcasters.

However, the research also highlighted challenges, including potential declines in critical thinking abilities, erosion of audience trust due to low-quality content, and harmful market monopolization. The study offers valuable insights for other traditional broadcasters undergoing similar digital transitions. It emphasizes embracing new technologies, fostering interactive communication, and integrating data analysis for personalized content while addressing new media technology challenges.

Future research should further explore specific strategies for navigating digital transitions effectively and examine new media technologies' impact on different audience segments. Continuous research is necessary to keep pace with rapid technological change and its implications for traditional broadcasters.

In summary, the impact of technological advancements on China's television industry, as highlighted in this research, extends far beyond the immediate context of Shanxi Radio and Television Station. The implications are profound and far-reaching. This transformation has ushered in an era of unprecedented opportunities and challenges, both for the industry and society at large. It is a clear testament to the ever-evolving nature of media convergence. As we move

forward, it is paramount to recognize that these advancements are not mere trends but long-term changes that demand continuous adaptation and innovation. The television industry, like many others, is navigating uncharted territory, where success hinges on the ability to harness technology's benefits while mitigating its pitfalls. This research, therefore, underscores the urgent need for all stakeholders to stay abreast of these changes and actively engage in strategies that ensure the continued growth, relevance, and ethical responsibility of the television industry in the digital age.

## 8.0 Acknowledgement

The researcher immensely grateful for the individuals who provided their time and shared their expertise throughout the course of this research. Their experiences and perspectives have been invaluable in shaping this study on the impact of technological advancements on the television industry in China.

## 9.0 References

- [1] Mittell, J., *Complex TV: The poetics of contemporary television storytelling*. 2015: nYU Press.
- [2] Dwyer, T., *EBOOK: Media Convergence*. 2010: McGraw-Hill Education (UK).
- [3] Wang, X., *Social media in industrial China*. 2016: ucl Press.
- [4] Zhang, C.B. and Y.H. Lin, Exploring interactive communication using social media. *The Service Industries Journal*, 2015. 35(11-12): p. 670-693.
- [5] Guo, Y., Y. Gu, and X. Zhang, The Study of the Changes in the Content Production and Profit Model of Television Programs in the Era of Media Convergence. *Frontiers in Economics and Management*, 2021. 2(9): p. 15-18.
- [6] Ye, S., Cross-screen integration innovation situation of Chinese TV programs. *Chinese Journal of Radio and Television*, 2016. 06: p. 71-73.
- [7] Bernard, H.R., *Unstructured and semistructured interviewing Research Methods in Anthropology. Qualitative and Quantitative Approach*, 1995: p. 208-236.
- [8] Minichiello, V., R. Aroni, and T.N. Hays, *In-depth interviewing: Principles, techniques, analysis*. 2008: Pearson Education Australia.
- [9] Burgess, R.G., *In the field: An introduction to field research*. 2002: Routledge.
- [10] Lofland, J. and L.H. Lofland, *Analyzing social settings*. 1971.
- [11] Showkat, N. and H. Parveen, *In-depth interview. Quadrant-I (e-Text)*, 2017.
- [12] Creswell, J.W., *Qualitative enquiry and research design: Choosing among five traditions*. Thousand Oaks, California, USA, and London: Sage, 1998.
- [13] Livingstone, S., *The changing nature of audiences. A companion to media studies*, 2003. 6: p. 337.
- [14] Albarran, A.B., *Media management and economics research in a transmedia environment*. 2013: Routledge.
- [15] Zeng, R. Research on the application of computer digital animation technology in film and television. in *Journal of Physics: Conference Series*. 2021. IOP Publishing.
- [16] Bailenson, J., *Experience on demand: What virtual reality is, how it works, and what it can do*. 2018: WW Norton & Company.



- [17] Bai, H., Y. Huang, L. Zhu, and Y. Zhu. Analysis on the Current Situation and Challenges of Print Media Transformation. in 2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021). 2021. Atlantis Press.
- [18] Napoli, P.M., Audience evolution: New technologies and the transformation of media audiences. 2011: Columbia University Press.
- [19] Andrejevic, M., Automated media. 2019: Routledge.
- [20] García-Perdomo, V., Re-digitizing television news: The relationship between TV, online media and audiences. *Digital journalism*, 2021. 9(2): p. 136-154.
- [21] Cianci, P.J., High Definition Television: The Creation, Development and Implementation of HDTV Technology. 2014: McFarland.
- [22] Carr, N., The shallows: What the Internet is doing to our brains. 2020: WW Norton & Company.
- [23] Flew, T., Understanding global media. 2018: Bloomsbury Publishing.
- [24] Hanusch, F. and E.C. Tandoc Jr, Comments, analytics, and social media: The impact of audience feedback on journalists' market orientation. *Journalism*, 2019. 20(6): p. 695-713.
- [25] Lin, J.-S., K.-J. Chen, and Y. Sung, Understanding the nature, uses, and gratifications of social television: Implications for developing viewer engagement and network loyalty. *Journal of Broadcasting & Electronic Media*, 2018. 62(1): p. 1-20.
- [26] Vanattenhoven, J. and D. Geerts. Broadcast, video-on-demand, and other ways to watch television content: a household perspective. in *Proceedings of the ACM International Conference on Interactive Experiences for TV and online Video*. 2015.
- [27] Lee, D., K. Hosanagar, and H.S. Nair, Advertising content and consumer engagement on social media: Evidence from Facebook. *Management Science*, 2018. 64(11): p. 5105-5131.
- [28] Jenkins, H. and M. Deuze, *Convergence culture*. 2008, sage Publications Sage UK: London, England. p. 5-12.
- [29] Arnd-Caddigan, M., Sherry Turkle: *Alone Together: Why We Expect More from Technology and Less from Each Other*: Basic Books, New York, 2011, 348 pp, ISBN 978-0465031467 (pbk). 2015, Springer.
- [30] Couldry, N., *Media, society, world: Social theory and digital media practice*. 2012: Polity.
- [31] Vosoughi, S., D. Roy, and S. Aral, The spread of true and false news online. *science*, 2018. 359(6380): p. 1146-1151.
- [32] Donauskaitė, D., Innovation in commercial and public service media in the Baltic countries: the role of global digital intermediaries. *Journal of Baltic Studies*, 2022. 53(4): p. 613-631.