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Enhancing Cinema Experience for Visually Impaired Persons in China: A Case Study on Shenzhen

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Abstract: Film is an essential medium through which people access information and participate in cultural activities. However, it is not equally accessible to everyone. In China, some visually impaired persons (VIPs) benefit from “barrier-free films” (无障碍电影, *Wuzhang'ai Dianying*), which help them access films through audio description (AD). AD provides oral descriptions of visual information without disturbing the original dialogue. China’s barrier-free film industry is progressing but remains at a preliminary stage, leaving potential deficiencies in VIPs’ film-watching experience. Relevant literature is scarce and often written in Chinese, constituting a barrier to connections with the international accessibility research community. Here, Shenzhen is used as an example to develop a holistic view of the status of China’s barrier-free film industry. Problems in the quantity, quality, physical facilities, and virtual services involved in AD are identified and recommendations regarding operating modes, accessibility training, and screening channels are proposed.

Keywords: barrier-free film, audio description, film accessibility, China

1 Introduction

Watching films is an increasingly popular pastime in China. Gower Street Analytics estimated that the global box office in 2022 was worth \$25.9 billion, with China contributing approximately \$4.33 billion (Mitchell 2023). China has the largest number of people with disabilities worldwide (Wu and Xie 2015, 20). According to the Accessibility Research Association (信息无障碍研究会, *Xinxi Wuzhang'ai Yanjiuhui*),¹ approximately 17 million people living in China are visually impaired.

¹ <https://www.siaa.org.cn/> (accessed October 28, 2022).

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Visually impaired persons (VIPs) are usually excluded from watching films because of the inaccessibility for them of visual information, film's primary medium. However, as the United Nations Convention on the Rights of Persons with Disabilities (2006) emphasises, everybody, including VIPs, should be guaranteed equal rights to access culture and information, of which film is an important component. As a response, the "barrier-free film" (无障碍电影, *Wuzhang'ai Dianying*) has emerged in China and becomes a primary way of making film accessible.

China's barrier-free films are designed for people with disabilities, but they are currently limited: one type of barrier-free film is intended for the visually impaired, and the only other type for the hearing impaired. Sometimes these two types are combined to serve both groups (Pan and Li 2013, 189). People with other disabilities, such as cognitive impairments (Starr 2018), might also benefit from the sensory access services provided in these films and should be considered more comprehensively in this initiative. This study, however, focuses on barrier-free films for VIPs, which include extensive additional narration of visual information without disturbing the original dialogue. In the West, Hong Kong, and Taiwan, a similar service is known as audio description (AD). AD is the aural description of visual images using a secondary audio track, feed, or on-stage narrator (Udo and Fels 2009, 1). It has been applied to various media, including theatrical performances, museum exhibits, and video games. Mainland China has not yet agreed on a standard and universally accepted term for this access service. When referring to it specifically, government documents tend to use the vague term "narration" (解说, *Jieshuo*). Researchers and practitioners prefer to borrow "audio description" (口述影像, *Koushu Yingxiang*) from the West in their publications or event reports. In general cases, people are more likely to use the term "barrier-free film" regardless of its broader semantic scope.

Barrier-free films in China are relatively new. They began in 2005 when Wang Weili and Zheng Xiaojie established Xinmu Cinema (心目影院, *Xinmu Yingyuan*)—China's first volunteer-run cinema for VIPs—in a quadrangle in Beijing to regularly screen films with live AD (Ma 2020, 18). The year 2009 was a landmark with the official screening of the film *Examination 1977* (高考1977, *Gaokao 1977*, 2009) in Shanghai, which attracted an audience of more than 400 and served as an occasion to set up China's first barrier-free film workshop (Zeng 2012). Since then, more production groups for film AD have emerged across China, such as the Feeling Images through Your Heart Programme (心聆感影, *Xin Ling Gan Ying*), Sound of Light (光影之声, *Guangying zhi Sheng*), and Wuxi Yangguang Volunteer Association (无锡阳光志愿者协会, *Wuxi Yangguang Zhiyuanzhe Xiehui*). In 2017, the appearance of the *Ever Shining Cinema Project* (光明影院, *Guangming Yingyuan*)²

² <https://tvs.cuc.edu.cn/shfwld/list.htm> (accessed April 24, 2023).

facilitated the expansion of film AD from live narration to recorded versions, allowing for wider distribution of barrier-free films in different cities in China (Zhao and Li 2021, 70). In 2020, the Entertainment Accessibility Project Team (文娱无障碍项目组, *Wenyu Wuzhang'ai Xiangmuzu*) was established under the leadership of Yier Information Technology Co., Ltd (译迹信息科技有限公司, *Yi'er Xinxin Keji Youxian Gongsi*). This team drafted the first industry standard for producing accessible entertainment, *A Production Workflow and Technical Standards for Accessible Entertainment Works* (无障碍文娱作品制作流程与技术标准, *Wuzhang'ai Wenyu Zuopin Zhizuo Liucheng yu Jishu Biaozhun*). The standard details the procedures, labor division, and timeframes required for barrier-free film production. It also summarises the basic principles of AD script writing and provides a template for the script's overall structure and main components.

These initial developments in Chinese barrier-free film would not have been achieved without substantial political support. For example, in 2008, the *Law of the People's Republic of China on the Protection of Disabled Persons* (中华人民共和国残疾人保障法, *Zhonghua Renmin Gongheguo Canjiren Baozhangfa*) required audiovisual production companies to “provide subtitles or narration for more television programmes and films.”³ In 2019, well-known Chinese film director Jia Zhangke submitted a proposal to the 13th National People's Congress calling for more comprehensive development of Chinese barrier-free film. In 2021, the *14th Five-Year Plan for the Protection and Development of People with Disabilities* (十四五残疾人保障和发展规划, *Shisiwu Canjiren Baozhang he Fazhan Guihua*) included cultural and barrier-free services for people with disabilities and stressed the need to increase the availability of barrier-free films.⁴

2 Related Research

Research on AD in the Chinese context is scarce, but increasing. As a professor of mass communication, Chao (2002) led the development of useful initial theoretical models of AD. Subsequently, Li (2013) and other scholars of communication studies examined the practical situation of barrier-free film in China. Yan and Luo (2019) reviewed the relevant theoretical underpinnings of AD in translation studies before comparing the practical development of AD in mainland China to that in Hong Kong and other parts of the world. Ma (2020) summarised Chinese AD

³ <https://baike.baidu.com/item/中华人民共和国残疾人保障法/1519359?fr=aladdin> (accessed October 28, 2022).

⁴ <https://baike.baidu.com/item/“十四五”残疾人保障和发展规划/58065528?fr=aladdin> (accessed May 08, 2023).

script-writing principles based on his abundant practical experience. In addition, new efforts have been or are being made in PhD projects to open up more avenues and methods for AD research in China. Leung (2018) conducted an empirical reception study to investigate VIPs' media use behaviors and their preferences regarding AD in Hong Kong. Tor-Carroggio (2020) investigated the possibility of applying text-to-speech AD in film production, finding that it could be an effective alternative to natural voice. To enhance the quantity and quality of Chinese AD scripts, Liu (2020) worked on AD translation from Spanish to Chinese and identified many inconsistencies regarding AD language between the two communities.

International research on AD is at an advanced stage. AD writing principles (e.g. Piety 2004; Salway 2007) have long been gathered through corpus-building or other research methods. The *Audio Description: Lifelong Access for the Blind Project* (ADLAB) compared AD development and crafting methods in six countries from 2011 to 2014.⁵ One of the main outcomes, the ADLAB guidelines, established a set of principles for AD script writing that can be applied to most audiovisual products. Based on this project, Maszerowska, Matamala, and Orero (2014) analysed various issues arising from the production of AD for the film *Inglorious Basterds* (2009) and proposed approaches to tackle these issues. Given the scarcity of materials available for teaching AD, Fryer (2016) assembled a manual combining research findings with practical experience. Matamala and Orero (2016) discussed accessibility from different research perspectives and delved into AD modality, concluding that the establishment of a new research field of accessibility studies should be considered. Most recently, Braun and Starr (2021) proposed a new, digital era of "Audio Description 2.0," arguing that AD research has transcended traditional boundaries through the emergence of new concepts, audiences, and advanced technologies. However, most AD research has been conducted in Europe, and little attention has been paid to AD in China. Considering also the fact that only a few relevant articles are written in Chinese, Chinese barrier-free film seems to be a missing piece in the research landscape.

This study adopts a holistic view of film accessibility as experienced by VIPs in China. Given that Chinese barrier-free film is still in its preliminary stages, Chinese VIPs may not previously have had satisfactory film-watching experiences. However, one rarely hears VIPs complain about this issue. This may be because the voluntary nature of China's barrier-free film production makes them feel grateful for this service (Tor-Carroggio 2020). Therefore, this article not only summarises the current status of barrier-free films but also, more importantly, identifies potential problems and offers relevant solutions to help VIPs enjoy, rather than endure, watching films.

5 <http://www.adlabproject.eu/home/> (accessed April 24, 2023).

Shenzhen—a city in southern China that is a leader in Chinese economic development—was selected as a case study for two main reasons. Firstly, Shenzhen has AD services. Owing to China's uneven economic development, barrier-free films are not yet widespread. They are primarily available in economically developed cities and are limited, if not completely non-existent, elsewhere. Shenzhen is one of China's first-tier cities, and its AD service provision is relatively well-established. Secondly, Shenzhen has a favorable accessibility environment. As the model city of China's reform and opening-up policy, it enjoys a good reputation for innovation, inclusion, and diversity. As early as 2009, it attempted to incorporate accessibility into its legal system, and greater accessibility has been a stated goal for a considerable period.

3 Barrier-free Film in Shenzhen

Recently, Shenzhen began to ensure film accessibility and promote broader accessibility through a series of laws and regulations. The *Shenzhen Action Plan for Building a Barrier-Free City* (深圳市创建无障碍城市行动方案, *Shenzhenshi Chuangjian Wuzhang'ai Chengshi Xingdong Fang'an*),⁶ introduced in 2018, incorporated the concept of “barrier-free” into the city's official master planning and required the implementation of barrier-free principles in various areas, including public spaces, information exchange, and cultural participation. In 2021, the *Regulations on Barrier-Free City Construction in Shenzhen Special Economic Zone* (深圳经济特区无障碍城市建设条例, *Shenzhen Jingji Tequ Wuzhang'ai Chengshi Jianshe Tiaoli*)⁷ took effect. This is the first legislation to guarantee the construction of a barrier-free city in China. One key goal is to encourage the production and distribution of accessible films and television programmes in various forms. The *Standards for Accessibility Design in Shenzhen* (深圳市无障碍设计标准, *Shenzhenshi Wuzhang'ai Sheji Biaozhun*)⁸ was implemented on March 01, 2022. This document outlines general design requirements for the construction of city roads, squares, green spaces, and buildings. It states that cinemas and other cultural buildings should improve accessibility by design, providing specific provisions for barrier-free toilets, guide dog accommodation, wheelchair seating, and other assistive facilities.

6 http://www.szft.gov.cn/bmxx_qt/qcjrllh/zwxgk/zcfg/content/post_4254430.html (accessed May 08, 2023).

7 <https://baike.baidu.com/item/深圳经济特区无障碍城市建设条例/58378191?fr=aladdin> (accessed May 08, 2023).

8 http://www.cjr.org.cn/info/laws/sy fz/content/post_755175.html (accessed May 15, 2023).

As specific products that enable visual media accessibility, barrier-free films are usually offered by non-profit organisations, public libraries, and reputable social associations in Shenzhen. The Shenzhen Disabled Persons' Federation (深圳市残疾人联合会, *Shenzhenshi Canjiren Lianhehui*)—a central organisation providing various services for people with disabilities—regularly collaborates with other departments to host barrier-free film screenings and conducts relevant training for AD volunteers. In addition, the Shenzhen Library (深圳图书馆, *Shenzhen Tushuguan*) sets up the Shenzhen Visually Impaired Information Accessibility Service Centre (深圳视障信息无障碍服务中心, *Shenzhen Shizhang Xinxin Wuzhang'ai Fuwu Zhongxin*) and the Voluntary Cinema for the Visually Impaired (视障公益影院, *Shizhang Gongyi Yingyuan*), whose main task is to launch audio-described film campaigns. The Accessibility Research Association, meanwhile, is the first nongovernmental organisation dedicated to information accessibility in China. It has provided no fewer than 50 offline screenings of barrier-free films and has helped online video platforms optimise their accessibility. In addition, as a core member of the Entertainment Accessibility Project Team led by Yier, the association co-organised the 2021 Accessible Film Forum (无障碍电影论坛, *Wuzhang'ai Dianyning Luntan*), which built the first platform for cross-border exchanges among industry, government, and academia.

Currently, the most common way for VIPs to watch barrier-free films in Shenzhen is to attend a film screening with live AD. According to the Shenzhen Disabled Persons' Federation,⁹ nearly 200 barrier-free film screening events have been successfully organised. The complete process required to deliver a barrier-free film screening is as follows. Event organisers first determine the film to be audio-described based on sources provided by film companies and VIPs' viewing preferences, which are gathered by posting polls or non-academic questionnaires in their contact networks with VIPs, usually WeChat groups (similar to WhatsApp groups). The films selected are most often original Chinese films with Chinese subtitles, and sometimes dubbed foreign films. Subsequently, AD volunteers are invited to work with visually impaired colleagues to produce AD scripts, revise them, and rehearse until the manuscript is finalised. At the appropriate time, VIPs are informed of the event date and venue through a social media post or phone call. On screening days, supporting volunteers are often on-site to help VIPs travel to the venue and make their way to their seats. When preparations are complete, the AD volunteers sit in one row of the venue, holding a microphone, and read the AD scripts live into the dialogue gaps as the film is shown. Finally, a discussion is usually held after the screening, allowing VIPs to ask questions and provide specific comments. As China has not completely exempted barrier-free filmmaking from copyright constraints,

9 http://www.cjr.org.cn/news/official/content/post_817077.html (accessed May 08, 2023).

conducting screening sessions with live AD has become an essential approach. It is also relatively easy to produce barrier-free films in this manner, as it does not involve many of the technical complexities, such as sound mixing, required for recorded versions.

Accessible film screenings with live AD are important. However, films with recorded AD can benefit more VIPs. The *Ever Shining Cinema*—jointly launched by the Communication University of China, Beijing Gehua CATV Network Co., Ltd (BGCTV) (北京歌华有线电视网络股份有限公司, *Beijing Gehua Youxian Dianshi Wangluo Gufen Youxian Gongsì*), and Dongfang Jiaying Media Company (东方嘉影电视院线传媒股份公司, *Dongfang Jiaying Dianshi Yuanxian Chuanmei Gufen Gongsì*)—is a successful project producing barrier-free films in recorded form. According to *Beijing Daily* (北京日报, *Beijing Ribao*),¹⁰ as of December 2021, more than 400 barrier-free films had been successfully produced by this project. The finished films are usually stored on a USB drive or small portable radio. In 2021, the project gave away hard copies of approximately 40 audio-described films to 2244 special education schools with a total of 320,000 visually impaired students. Offline screenings of these audio-described films are also frequently organised in cinemas or other venues, giving VIPs more opportunities to watch films together. This project's addressing of copyright issues is worth clarifying: the first choice of films for *Ever Shining Cinema* has been films whose copyright is already held by its member companies, BGCTV and Dongfang Jiaying. It also relies on copyright donations from other film companies. For example, Shanghai Ruyi Film and TV Production Co., Ltd (上海儒意影视制作有限公司, *Shanghai Ruyi Yingshi Zhizuo Youxian Gongsì*) donated the copyright of *The Legendary Tavern* (老酒馆, *Lao Jiuguan*, 2019) to *Ever Shining Cinema* for barrier-free production. The barrier-free films produced by this project are not available to the general public but only to the visually impaired. They are encrypted and require a password to be watched. Sometimes, the password is the VIP's own Disability Certificate Number (残疾证号, *Canji Zheng Hao*), a 20-digit legal ID which identifies the person and the type and level of their disability.

Watching recorded barrier-free films online through video apps has become a popular choice. A report co-conducted by the Accessibility Research Association and Tencent (腾讯, *Tengxun*) (2019) showed that 94 % of VIPs expressed a desire to use video apps, and 61 % had already been using them. A later report conducted by the association and Youku (优酷) (unpublished data) found that 36 % of respondents spent 1–2 h per day using video-based entertainment apps, and 30 % spent more than 2 h a day. Youku, founded in 2006, is one of China's leading online video platforms and a leader in accessibility services, having optimised its app design for better accessibility in 2020. It also introduced an added content section called “Barrier-Free

10 <https://baijiahao.baidu.com/s?id=1720490401640413381&wfr=spider&for=pc> (accessed April 24, 2023).

Cinema” (无障碍剧场, *Wuzhang'ai Juchang*) to accommodate recorded audio-described films for VIPs. According to its plan, at least 100 audio-described films would be uploaded to its platform over the following three years. Xigua Video (西瓜视频, *Xigua Shipin*)—another popular video platform—followed, officially launching its “Barrier-Free Cinema” (无障碍影院, *Wuzhang'ai Yingyuan*) project in April 2021. It offers more than 100 audio-described films and plans to add 10 per month. Additionally, apps such as the Listen to the World App (听世界, *Ting Shijie*) and the Barrier-Free Films and Television App (无障碍影视, *Wuzhang'ai Yingshi*) are online platforms specifically developed for VIPs to appreciate audiovisual products. Their content also includes TV series and documentaries in addition to films.

4 Existing Issues

As barrier-free film services are progressively fostered by the government, social groups, and other parties, Chinese VIPs are increasingly able to appreciate films aurally. However, this does not mean that their needs are completely met. Making films accessible is a demanding and complex task covering a range of aspects from the physical attributes of the screening venue to advanced technological challenges. Through careful consideration of scattered information gathered from various sources, such as press releases, industry reports, and anecdotes from VIPs, we identified several issues that might affect VIPs' film-watching experiences.

4.1 Limited Quantity

Despite many efforts, the actual supply of barrier-free films with either live or recorded AD is less than optimal. According to the Shenzhen Disabled People Comprehensive Service Centre (深圳市残疾人综合服务中心, *Shenzhenshi Canjiren Zonghe Fuwu Zhongxin*), only 5 offline barrier-free film screenings were successfully held in 2020, and 7 each in 2021 and 2022. As regards barrier-free films with recorded AD on video apps, less than 50 can be found on the Youku platform. Compared to the approximately 700 original films released for sighted viewers in a year, as reported by the *China Film Market Annual Report 2021* (2021中国电影市场年度报告, *2021 Zhongguo Dianying Shichang Niandu Baogao*), the provision of barrier-free films for VIPs is far from adequate. Tor-Carroggio (2021, 315) surveyed Chinese VIPs' opinions of AD and found that the mean satisfaction score for AD quantity on a scale of 0–4 was 3.15.

Given the voluntary nature of Chinese barrier-free film provision, such a shortage is primarily due to insufficient financial resources. Organising a barrier-

free film screening with live AD usually costs approximately \$725, which covers labor costs, food expenses, and equipment and venue rental. Producing a recorded version can cost as much as \$7300 since more time, technology, and expertise are required. The development of barrier-free films currently relies on limited financial support from the government, social groups, and individuals. For example, in 2007, the Shanghai Charity Foundation (上海市慈善基金会, *Shanghaishi Cishan Jijinhui*) donated 70,000 RMB to the Shanghai Film Critics Society (上海电影评论学会, *Shanghai Dianying Pinglun Xuehui*) to support the launch of a barrier-free film project (Pan and Li 2013). In addition, a few companies, such as Yier and Shanghai Guava Cultural Communication Co., Ltd (上海番石榴文化传播有限公司, *Shangha Fanshiliu Wenhua Chuanbo Youxian Gongsì*), are willing to cover the cost of barrier-free film provision, despite knowing that making barrier-free films accessible free of charge in China will hardly bring them economic benefits.

Copyright issues also limit the supply of barrier-free films, especially recorded AD versions. Some regulations, such as the *Regulation on Protection of the Right of Communication through Information Networks* (信息网络传播权保护条例, *Xinxi Wangluo Chuanboquan Baohu Tiaoli*),¹¹ have attempted to enable VIPs to fully access a wide range of information and culture. However, they mainly emphasise written works and do not address audiovisual products such as films and television programmes. Currently, the production of recorded barrier-free films mainly depends on copyright holders granting copyright permissions free of charge. For example, in 2013, Huayi Brothers Media Group (华谊兄弟传媒集团, *Huayi Xiongdi Chuanmei Jituan*) and 40 other film companies in China donated the copyright of 50 domestic films for barrier-free film production. The *Ever Shining Cinema Project* also relies on copyright donations or uses works for which it holds copyright. In short, only a few original films can be produced as separate barrier-free versions under copyright restrictions.

4.2 Limited Quality

The quality of barrier-free films remains in need of enhancement. On the film *Goodbye Mr Loser* (夏洛特烦恼, *Xialuo Te Fannao*, 2015) available on a streaming platform, we found negative comments regarding the quality of its AD.¹² One comment complained, “audio description should not override film dialogues, and the experience is bad.” Another said, “Ma Dongmei (the protagonist) pokes Chen Kai’s

¹¹ <https://baike.baidu.com/item/信息网络传播权保护条例/4327386?fr=aladdin> (accessed May 08, 2023).

¹² <https://www.ixigua.com/6965768652251628068?id=6966525098434134559&logTag=dab886a607e065173fcc> (accessed May 08, 2023).

eyes out with resin or something else in the grove, and the audio describer has missed this important detail.” While there were positive comments, most of them tended to express gratitude for the service itself rather than praising the quality of the film’s AD. In the survey conducted by Tor-Carroggio (2021, 315), the mean satisfaction score for AD quality was 3.33 on a scale from 0 to 4, higher than the score for AD quantity, which she suggests might be precisely because Chinese VIPs, having long been neglected, tend to think highly of this inclusive service.

The quality of barrier-free films largely depends on the competence of audio describers, most of whom are amateurs in China. Tor-Carroggio and Casas-Tost (2020, 92–100) conducted a survey to profile Chinese audio describers. Results showed that the vast majority (71.7 %) were volunteers who did not charge for their work. Notably, 17 % of the respondents saw audio description as paid professional work and 15.1 % worked full-time in AD. However, few audio describers were formally trained, with 35.8 % of participants being taught how to audio-describe visual information and less than 10 % holding a relevant training certificate. In addition, 62.3 % of the respondents reported having audio-described for less than 50 h, suggesting that they also needed more experience. Based on the limited recruitment information available online (Lv 2020, 35), the requirements to be an audio describer are usually quite general, such as having good verbal and writing skills, and do not include specialised knowledge or skills in AD production. These observations demonstrate that the role of audio describer in China has not yet become an established professional position but is usually occupied by volunteers from other areas of work. Most volunteers require more expertise and/or experience to guarantee higher-quality AD production.

4.3 Inadequate Facility Support

Deficiencies in facilities can also compromise VIPs’ experience of watching barrier-free films. The venue is the starting point for a successful inclusive cultural event (Zhang 2019, 79). In a survey conducted by the Accessibility Research Association (unpublished data), only 11 % of visually impaired participants chose “going to the cinema alone” for film-watching. The figures for “with family members” and “with sighted friends” were 65 % and 61 %, respectively. VIPs often need to be accompanied to the cinema and in most cases by sighted people, possibly because the cinemas themselves are not sufficiently accessible. For example, crucial textual information in most cinemas is not available in separate audio, braille, or large-print versions. Thus, VIPs cannot actively access the information they want but must wait to passively receive it from others. Many other aspects of the venue, such as tactile ground surface indicators, barrier-free toilets, and provisions for guide dogs, also

need to be further improved to ensure that VIPs can move around and use the venue properly on their own.

Moreover, VIPs usually watch audio-described films in separate rooms, isolated from sighted audiences. This is mainly because AD may sometimes disrupt the film-watching experience of sighted people, and advanced technologies are still lacking to enable VIPs to access AD individually. In the West, specific AD receivers and infrared headsets have been developed to achieve this functionality, thus making it the norm for VIPs to enjoy films alongside sighted viewers. In Shenzhen, however, recorded audio-described films do not usually allow the separation of AD tracks in physical cinemas or online platforms. In the more common barrier-free film sessions with live AD, audio description volunteers are usually limited to using a simple microphone and public address system to deliver AD to everyone in the room. Regardless of AD type, VIPs thus cannot watch films alongside sighted audience members. A VIP once said that having the opportunity to sit in the same screening room with sighted people and enjoy the film together aligns more with the idea of barrier-free living they pursue.¹³

4.4 Non-Comprehensive App Design

With many VIPs attempting to watch recorded barrier-free films online using video apps, the accessible design of these apps remains a concern. User experience in video apps is reflected in what VIPs have said about online platforms more broadly. The China Information Accessibility Product Alliance (中国信息无障碍产品联盟, Zhongguo Xinxin Wuzhang'ai Chanpin Lianmeng) (2016) researched VIPs' general experiences using Chinese online platforms. More than half of respondents indicated that they watched videos online, but only 11 % said they were able to use these without any barriers. The Accessibility Research Association also evaluated China's top ten mainstream information apps and pointed out that accessible designs for video playback were less than satisfactory.¹⁴ A comment on a social website, made on May 19, 2022, answered the question, "What apps have followed the principles for accessible design and been truly optimised for VIPs?"¹⁵ In a rare example of feedback from a VIP, it says, "The accessibility design of many video apps is a little terrible," and "The experience is bad." For video apps that have already been optimised for accessible operation, it says, "They are okay" or "They can be used."

¹³ https://www.sohu.com/a/423493187_100021240 (accessed May 08, 2023).

¹⁴ https://zhuanlan.zhihu.com/p/49902644?utm_source=wechat_session&utm_medium=social&utm_oi=655150750162882560 (accessed April 24, 2023).

¹⁵ <https://www.zhihu.com/question/26087009> (accessed April 24, 2023).

The following section briefly evaluates the accessibility design of video apps using the example of Youku, a pioneer and model of accessibility adaptation among online video platforms in China. Youku has introduced voice-over functionality for almost all components. Critical film information, including images, videos, and GIFs, contains text or text alternatives and can thus be delivered to VIPs through text-to-speech technology. Entering specific data as text is time-consuming and error-prone for VIPs, so Youku allows for voice input and places the activation button in the middle of the screen for easy clicking. It also offers a special mode that displays text at a larger default size, making it easier for partially sighted people to read, especially on a relatively small phone screen. Youku has come a long way in terms of video app accessibility design in China, but there may remain barriers to VIPs interacting effectively with it. For example, crucial touchpoints, such as “barrier-free” buttons or other column tabs, are often located in awkward corners and at a short distance from each other, making it difficult to accurately click on them. In addition, if VIPs make unintentional mistakes, they can only use the tiny “cancel” button to return, as the app lacks a more effective option such as an audio exit. The special mode also appears to contain fewer items than the standard version.

5 Future Direction

Reflecting on the current situation and practice of film accessibility in China, improvements in the following areas could serve as a way forward.

5.1 Government Policy and Market Mechanism

Chinese barrier-free film is still in its infancy, and government support is essential for its future development. To address inadequate supply, the government could introduce policies that mandate the minimum availability of barrier-free films in local cinemas, libraries, and online video platforms, as in the West. The UK government passed the *Broadcasting Act* in 1996, requiring that 10 % of digital television programmes be provided with AD (Leung 2018, 64). The copyright issue of barrier-free films in China also requires more attention from the government to ensure a higher legal output (Feng 2018, 36). Some Chinese scholars have suggested that the government will need to pass legislation to integrate barrier-free films into fair-use measures for VIPs (e.g. An 2021). The official entry into force of the *Marrakesh Treaty* for China on May 05, 2022, and the publication of the *Interim Provisions on Providing Works to People with Reading Disabilities in A Barrier-Free Manner*

(以无障碍方式向阅读障碍者提供作品暂行规定, *Yi Wuzhang'ai Fangshi xiang Yuedu Zhang'aizhe Tigong Zuopin Zanxing Guiding*)¹⁶ on August 01, 2022, demonstrate a trend in this direction. Furthermore, accessible filmmaking, as proposed by Romero-Fresco (2019), may be able to tackle the copyright problem at its root by integrating accessibility into the early stages of film production rather than treating it as an afterthought, thus ending the traditional separation between filmmaking and accessibility.

However, the role of the market mechanism is inevitable. In the UK, USA, and other developed countries, VIPs can rent an audio-described film online using a streaming platform or buy tickets for a screening with AD in a cinema. Drawing on this idea, China should change the voluntary and freely available nature of barrier-free films and allow them to circulate as ordinary commodities. Thus, profits could lead to increased production, thereby meeting the demands of VIPs and fostering sustainable growth. Indeed, the commercial prospects of the barrier-free film industry are promising in China due to its vast consumer base. More than 17 million Chinese VIPs require AD to watch films regularly, which is a crucial way for them to participate in information circulation and cultural life. Barrier-free films could also appeal to other social groups, such as older people whose eyesight has worsened and is no longer allowing them to view media as before. AD can even be useful for sighted viewers, as it allows them to follow a programme while performing another activity and understand the original information more easily and deeply (Hernández-Bartolomé and Mendiluce-Cabrera 2009, 3). As early as 1995, BBC research demonstrated that 58 % of the general population in the UK enjoyed using AD (ibid.).

5.2 Industry Training and University Education

More systematic training should be provided to audio describers to produce high-quality barrier-free films. In recent years, the industry has launched an increasing number of accessibility training programmes. For example, in 2018, the Sun Yat-sen Library of Guangdong Province (广东省立中山图书馆, *Guangdong Shengli Zhongshan Tushuguan*) held a two-day training programme for voluntary AD service providers, with 40 participants from various backgrounds.¹⁷ These programmes have yielded positive initial results, such as the introduction of China's AD production workflow and basic AD writing principles. However, most have been short-term,

16 <https://baike.baidu.com/item/以无障碍方式向阅读障碍者提供作品暂行规定/61830803?fr=Aladdin> (accessed May 08, 2023).

17 https://whly.gd.gov.cn/news_newtpxw/content/post_2843438.html (accessed May 08, 2023).

small-scale projects, not yet constituting a systematic and professional training regime conducive to a full-scale transformation. For this, Hong Kong may provide some inspiration. In 2011, CreateHK funded a one-year *Hong Kong Audio Description in Films Development Scheme* (Government Information Centre 2011), comprising four main components. First, international experts were invited to workshops to provide a general overview of AD for 200 AD practitioners. This was followed by seminars focusing on the production of AD for Chinese films. Trainees were then required to produce AD for 10 films and screen these films for visually impaired groups, learning about specific expectations from the target audience. Finally, five audio-described films were shown to the public to promote accessibility for the entire community. In addition, Hong Kong has several professional organisations, such as Audio Description Association, which offers basic AD training, specialised AD training, and courses for participants to study for particular AD qualifications (Leung 2018, 99).

Furthermore, barrier-free film should be introduced in higher education institutions as a subject of teaching and research. In the West, it is widely accepted that AD falls within the discipline of Audiovisual Translation Studies, and universities usually incorporate AD into audiovisual translation programmes. For example, University College London offers an optional module in *Audio Description for People with Limited Access to Visual Information*, and the University of Leeds has a compulsory course on *Subtitling for the Deaf and Hard of Hearing and Audio Description*, both of which are individual units for students in (Audiovisual) Translation Studies. In mainland China, Professor Xiao Weiqing of Shanghai International Studies University (SISU) has acted as a pioneer in introducing AD into her *English-Chinese Film and Television Translation* module. In 2022, a PhD researcher at SISU named Ding Xinru, under Professor Xiao's supervision, completed a project titled *The Effects of Audio Description Practice in Undergraduate Interpreting Education*, the first PhD thesis on AD conducted by a Chinese citizen on the mainland (Tor-Carroggio 2020). In addition, the Communication University of China has actively promoted studies related to barrier-free film through various scholarly events and has nurtured postgraduate students with such research interests. These phenomena indicate an awakening in China to the value of including AD in university education programmes. However, based on the teaching experience of Yeung (2007, 234–239), AD in China can be further recognised as an independent subject with its own course modules. Yeung also suggests that different audiovisual products vary in AD requirements and reception modes and that students should therefore have more opportunities to practice AD in different media, such as film, television, and opera, to make an impact on broader society.

5.3 Offline and Online Cinemas

The physical accessibility of traditional offline cinema must be improved to create a more inclusive film-watching environment. Inspiration may be drawn from the *European Accessibility Culture and Training Project*,¹⁸ which has comprehensively addressed the venue accessibility issue. Its output has highlighted the importance of full consideration of accessibility for indoor and outdoor venues and provided a preliminary summary of the necessary facility elements, as shown in Figure 1.

In addition, Shenzhen’s recently issued *Standards for Accessibility Design* provide guidance for retrofitting infrastructure. These stipulate specific design requirements for accessible entrances and exits, facilities for guide dogs, paths for the blind, and other aspects of the building environment to ensure easy navigation of spaces by VIPs. Moreover, the *Zhi’ai Cinema Project* (至爱影院, *Zhi’ai Yingyuan*) in Shanghai has established a good example of physical accessibility by installing specific AD receivers and matching wireless headsets, thereby allowing VIPs to watch films alongside their sighted friends. In addition to these basic accessibility



Figure 1: Elements to be considered for venue accessibility (cited in Zhang 2019, 80).

18 <https://pagines.uab.cat/act/> (accessed May 08, 2023).

upgrades, we can draw further ideas from Western countries where accessible cinema is more advanced. In the UK, over 300 cinemas are equipped with a Digital Theatre System or Dolby delivery unit for audio-described films, ensuring high-quality audio for excellent speech intelligibility with minimal background noise (World Blind Union 2016, cited in Leung 2018, 63). The *Immersive Accessibility Project* conducted by the Royal National Institute of Blind People relies on VR technology and develops other advanced tools to realise AD for 360-degree content,¹⁹ ensuring greater enjoyment and immersion for the visually impaired.

Simultaneously, online video apps should also be optimised for accessibility, thus creating more virtual barrier-free cinema without time and space constraints. It has been suggested that online barrier-free cinemas should ensure content and design accessibility (e.g. H. Jie, unpublished data). Content accessibility means that in addition to the original films for sighted viewers, corresponding barrier-free versions or separate AD tracks should be available on these platforms to satisfy the specific needs of VIPs. Furthermore, high-quality foreign films should be made accessible to allow VIPs access to foreign cultures, thus connecting them to the broader world. This task can be particularly complicated because it involves the additional steps of translation between languages and coordinating with dubbing. Therefore, more dedicated resources are required to ensure that VIPs have equal access to international media.

Design accessibility is another crucial area, and apps must adapt to help VIPs reach accessible content smoothly. There are no accessibility design standards specifically for online barrier-free cinema. However, the general *Web Content Accessibility Guidelines* (WCAG) (W3C Recommendation 2018), which have been accepted and adopted by many Western countries and some companies in China, should serve as a provisional reference. The WCAG provides detailed requirements on fonts, color contrast, data deletion, and many other aspects necessary to make digital resources accessible to all groups. It also bears mention that Microsoft China, Xiaomi Group (小米集团, *Xiaomi Jituan*), and the Shanghai Youren Foundation (上海有人公益基金会, *Shanghai Youren Gongyi Jijinhui*) released the Chinese version of the *Inclusive Design Manual*²⁰ in May 2022. This manual introduces fundamental design principles, including what constitutes exclusion, how to learn from diversity, and how to make design suitable for more groups, which could provide guidance for the research and development of accessible products at the macro level.

¹⁹ <https://www.rnib.org.uk/news/audio-description-for-360-degree-content/> (accessed May 08, 2023).

²⁰ <http://www.yijiayi.org.cn/files/life/2022/%E5%8C%85%E5%AE%B9%E6%80%A7%E8%AE%BE%E8%AE%A1%E5%8E%9F%E5%88%99%E6%89%8B%E5%86%8C.pdf> (accessed May 08, 2023).

6 Conclusions

In an inclusive and diverse society, VIPs have equal rights to access information and participate in cultural life, which must be facilitated in practice. Thus, audiovisual products are gradually being reshaped to integrate them instead of isolating them further. China's barrier-free film industry provides an example of increased inclusivity, allowing VIPs to access films by adapting visual information to audio. The development of barrier-free films in China has achieved a remarkable amount; however, in some respects, it is not yet well established. Therefore, it is necessary to develop the industry further to ensure that VIPs can truly enjoy watching films without tolerating suboptimal experiences. Following a holistic review of the current situation in Shenzhen, this article identified potential problems with the quantity and quality of accessible films, as well as the physical facilities and virtual services used to view them. It then made suggestions for improvements in operating modes, nurturing of talent, and screening channels. The mission to improve the film-watching experience of VIPs in China is far from complete and there is still a long way to go even before much relevant research can be undertaken.

Due to the lack of relevant data, this study is limited to a general descriptive discussion of China's barrier-free film industry. In the future, more detailed analyses of the specific issues that have been identified are strongly recommended, particularly for AD script quality assessment and app accessibility design evaluation. A corpus might also be developed to summarise the current norms of AD writing in China before comparing them with AD standards in the West. In addition, more empirical reception studies should be undertaken to engage visually impaired groups in the process of co-creation. Film accessibility and broader media accessibility have appealed to scholars worldwide in a variety of fields. These researchers have developed a new global accessibility research community to survey various accessibility phenomena and develop new methodologies (Zhang 2019, 85). Chinese scholars must establish closer connections with this community and treat Chinese barrier-free film as part of global accessibility development initiatives. Through exchanges of theoretical considerations and hands-on evidence, input from VIPs' lived experiences, and leadership from the government in legal and economic initiatives, the participation of VIPs in visual culture can be enhanced not only in China but worldwide.

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