

The Inheritance and Development of Northern Shaanxi Folk Songs in the Era of Big Data

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ABSTRACT

With the arrival of the big data era, the inheritance and development of northern Shaanxi folk songs are facing unprecedented opportunities and challenges. From the perspective of big data, this paper analyses the communication status of northern Shaanxi folk songs in contemporary society, discusses the impact of the big data era on the inheritance and development of northern Shaanxi folk songs, and puts forward a series of innovative inheritance and development strategies. Firstly, this paper gives a brief introduction to the concept and characteristics of the big data era, and elaborates on the historical and cultural value of northern Shaanxi folk songs. Through the data mining of network platforms and field research, the communication characteristics of northern Shaanxi folk songs are analysed, and it is found that its communication channels are wide and the audience groups are diverse, but at the same time, it also faces the dilemma of the traditional inheritance method and the problem of low acceptance of the younger generation. In view of these problems, this paper proposes a series of inheritance and development strategies. In terms of dissemination, it is suggested that new media channels such as digital music platforms and online short videos be used for promotion; in terms of education and training, it is advocated that Shaanxi folk songs be integrated into school music education and professional training courses to cultivate a new generation of Shaanxi folk song inheritors; in terms of artistic innovation, it is encouraged that Shaanxi folk songs be combined with modern art forms, and that new Shaanxi folk songs with the characteristics of the times be created. In order to verify the feasibility of the proposed strategy, this paper selects two successful cases to introduce and analyse, summing up a series of valuable experience. Finally, this paper summarises the whole paper and looks forward to the future inheritance and development of northern Shaanxi folk songs in the era of big data.

KEYWORDS

Big data era; Northern Shaanxi folk songs; Inheritance; Development; Communication strategy

1. INTRODUCTION

With the arrival of the big data era, information technology is changing rapidly, providing new opportunities for the inheritance and development of traditional culture. As an important part of Chinese folk music, northern Shaanxi folk songs have high historical and cultural value and artistic charm. However, in the context of modern society, northern Shaanxi folk songs are facing inheritance dilemmas, and how to achieve innovation and development on the basis of maintaining traditional characteristics has become an urgent problem to be solved. This paper explores the inheritance and development of northern Shaanxi folk songs in the new era through big data analysis, with a view to providing reference for research and practice in related fields.

The era of big data provides rich and diverse data resources for the inheritance of traditional culture, which helps to excavate and analyse the communication characteristics, audience needs and problems of northern Shaanxi folk songs. On this basis, this paper proposes a series of inheritance and

development strategies, including innovative communication methods, strengthening education and training, and integrating modern art. Through actual case analysis, the effectiveness of these strategies is verified, providing useful reference for the inheritance and development of folk songs in northern Shaanxi.

The research significance of this paper lies in the following: firstly, it provides theoretical support for the inheritance and development of northern Shaanxi folk songs, which helps to expand the research horizons of traditional culture; secondly, it provides reference for the inheritance of intangible cultural heritage in other regions and fields, and promotes the integration of traditional culture and modern society; thirdly, it raises people's awareness of northern Shaanxi folk songs and their cultural value, and inspires more people to pay attention to and participate in the protection and innovation of traditional culture. We hope that this paper can contribute to the inheritance and development of northern Shaanxi folk songs and contribute to the prosperity of traditional culture in the era of big data.

2. ANALYSIS OF THE CURRENT SITUATION OF SHAANXI FOLK SONGS IN THE ERA OF BIG DATA

2.1. Data source and collection

2.1.1. Data Mining on Network Platforms

Data mining of network platform plays an important role in the inheritance and development of northern Shaanxi folk songs. Firstly, through the network platform, we can obtain a large amount of data of northern Shaanxi folk songs, including audio, video, lyrics and so on, which provide rich materials for our research. Secondly, the data mining of the network platform can help us understand the dissemination of northern Shaanxi folk songs, including dissemination channels, dissemination scope, audience groups, etc., which helps us to analyse the dissemination characteristics and laws of northern Shaanxi folk songs. In addition, data mining on the network platform can also provide us with the popularity trend and changes of northern Shaanxi folk songs, which is important for us to understand the development trend of northern Shaanxi folk songs and the acceptance of the younger generation. By mining the comments and feedback on the network platform, we can understand the audience's attitudes and views on northern Shaanxi folk songs, which is of reference value for us to adjust and optimise the inheritance and development strategies of northern Shaanxi folk songs.

In conclusion, the data mining on the network platform provides strong support for the inheritance and development of northern Shaanxi folk songs. By mining and analysing the data on the network platform, we can better understand the current situation and trend of northern Shaanxi folk songs, so as to formulate more effective inheritance and development strategies [1].

2.1.2. Field research and interviews

In the process of field research and interviews, we gained an in-depth understanding of the current situation of the inheritance of folk songs in northern Shaanxi as well as the existing problems. We interviewed local folk artists, music teachers and ordinary residents to understand their views on northern Shaanxi folk songs and the difficulties of inheritance.

Through the field research, we found that the inheritance of northern Shaanxi folk songs faces some problems. Firstly, the traditional way of inheritance is gradually failing, and the younger generation has less interest in and understanding of northern Shaanxi folk songs. Secondly, due to changes in modern lifestyles, the occasions for singing and the range of audiences for northern Shaanxi folk songs have decreased. These problems make the inheritance and development of northern Shaanxi folk songs face difficulties. However, we also see some positive factors. Some music teachers and folk artists are making efforts to integrate northern Shaanxi folk songs into school music education

and professional training in order to preserve and pass on this valuable cultural heritage. In addition, some successful cases have inspired us, such as a digital promotion project of northern Shaanxi folk songs and an online performance by a northern Shaanxi folk song art group, which have promoted northern Shaanxi folk songs to a wider audience through innovative approaches [2].

Overall, the field research and interviews gave us a deeper understanding of the current situation of the heritage of northern Shaanxi folk songs and the existing problems, and also provided us with a basis for proposing solutions. We need to continue our efforts to explore new inheritance and development strategies to protect and pass on the important cultural heritage of northern Shaanxi folk songs.

2.2. Communication characteristics of Shaanxi folk songs

2.2.1. Communication channels and scope

In the era of big data, the dissemination channels and scope of Shaanxi folk songs have been greatly expanded. Firstly, the network platform has become an important channel for the dissemination of northern Shaanxi folk songs. Through music websites, social media, video platforms, etc., northern Shaanxi folk songs can be quickly spread around the world, so that more people can learn about this excellent traditional culture. Secondly, traditional media such as radio, television, and newspapers have also promoted and disseminated northern Shaanxi folk songs to a certain extent, increasing their popularity and influence [3]. In addition, the dissemination range of northern Shaanxi folk songs is also expanding. In the past, northern Shaanxi folk songs were mainly spread in local areas, but now they have gradually gone to the whole country and even the world. Many music lovers at home and abroad have begun to pay attention to and study northern Shaanxi folk songs, making them influential in a wider range of areas. At the same time, northern Shaanxi folk songs have gradually become a major highlight of the tourism industry, attracting a large number of tourists to experience and appreciate. However, there are some problems in the process of dissemination. On the one hand, due to the complexity of the communication content of the network platform, northern Shaanxi folk songs face competition with other music, leading to the dispersion of its attention. On the other hand, the influence of traditional communication methods is gradually weakening, and the acceptance of northern Shaanxi folk songs by the younger generation needs to be improved. Therefore, how to broaden the communication channels and expand the scope of dissemination on the basis of maintaining the traditional characteristics has become an important issue for the inheritance and development of northern Shaanxi folk songs in the era of big data.

2.2.2. Audience groups and feedback

In the era of big data, the audience groups and feedback of northern Shaanxi folk songs show the characteristics of diversification and youthfulness. First of all, through the data mining and analysis of the network platform, we found that the audience groups of northern Shaanxi folk songs are no longer limited to the elderly, and more and more young people are beginning to pay attention to and like northern Shaanxi folk songs. This is due to the fact that the online platform provides more convenient and rich music resources, which makes it easier for young people to resonate when they come into contact with northern Shaanxi folk songs [4]. In addition, the interactivity of online platforms also makes the feedback of northern Shaanxi folk songs more timely and direct. The audience can express their views and suggestions on northern Shaanxi folk songs through comments, likes, and shares, which are important guiding significance for the inheritance and development of northern Shaanxi folk songs. At the same time, this interactivity also prompts the inheritors of northern Shaanxi folk songs to pay more attention to the audience's needs and preferences in their creations and performances, in order to improve the market competitiveness of northern Shaanxi folk songs. However, audience feedback in the era of big data also brings certain challenges. On the one hand, Shanbei folk songs may be subject to some negative comments or malicious attacks in the process of dissemination, which puts some pressure on the inheritance and development of Shanbei

folk songs. On the other hand, excessive attention to audience feedback may lead to excessive catering to the market in the inheritance process of northern Shaanxi folk songs, neglecting its own artistic value. Therefore, when dealing with audience feedback in the era of big data, the inheritors of northern Shaanxi folk songs need to learn and innovate moderately on the basis of respecting tradition to maintain the artistic charm of northern Shaanxi folk songs [5].

In summary, the era of big data provides new opportunities for the dissemination and inheritance of northern Shaanxi folk songs, making the audience more diverse and feedback more timely. However, when dealing with these opportunities and challenges, we need to find a balance between respect for tradition and innovation to achieve the sustainable development of Shaanxi folk songs.

2.3. Problems and challenges facing Shaanxi folk songs

2.3.1. Dilemma of traditional inheritance methods

In the traditional inheritance methods, Shaanxi folk songs face some dilemmas. First of all, with the development of modern society and the progress of science and technology, the traditional inheritance way is gradually impacted. Young people are more inclined to accept modern pop music, and their interest in traditional northern Shaanxi folk songs has weakened, leading to a gradual shrinkage of the audience of traditional folk songs. Secondly, the traditional way of passing on the tradition to masters and disciples is also facing difficulties, as young people nowadays are often unwilling to invest a lot of time and energy in learning traditional folk song singing skills. In addition, traditional performance venues and opportunities are limited, leading to a shrinking performance market for northern Shaanxi folk songs, further affecting the sustainable development of traditional inheritance methods. Therefore, in order to protect and pass on the northern Shaanxi folk songs, we need to find new inheritance methods to meet the needs of modern society, so that more young people can understand and love the northern Shaanxi folk songs and pass them on.

2.3.2. Acceptance of the young generation

In the era of big data, the acceptance of the younger generation for northern Shaanxi folk songs has become an important factor affecting its inheritance and development. With the development of science and technology and the popularisation of the Internet, the aesthetic concepts and music preferences of young people have changed greatly. Compared with traditional music forms, they are more inclined to accept fresh, fashionable and innovative music works [6].

First of all, northern Shaanxi folk songs face a certain era of disconnection in the process of dissemination. The melodies and lyrics of traditional northern Shaanxi folk songs often reflect the lifestyle and emotional expression of the past, which is quite different from the life experience and values of the younger generation. Therefore, in the process of inheritance and development, it is an important challenge to make the younger generation resonate and feel the charm of northern Shaanxi folk songs. Secondly, although the younger generation is more diversified in terms of musical aesthetics, their knowledge of traditional music is still relatively limited. In many cases, they are more familiar with modern forms of music such as domestic and international pop music and electronic music, and know relatively little about traditional music such as northern Shaanxi folk songs. This has limited the spread and acceptance of northern Shaanxi folk songs among the younger generation [7]. However, we also see some positive signs. With the country's emphasis on traditional culture, more and more young people are paying attention to and learning traditional music. They come into contact with traditional music forms such as Shaanxi folk songs in school music education, and gradually become interested in Shaanxi folk songs by participating in various performances, competitions and other activities. In addition, some innovative musicians have begun to combine northern Shaanxi folk songs with modern music elements, creating a number of new works of northern Shaanxi folk songs with the characteristics of the times, which also provides a possibility for the younger generation to accept and love northern Shaanxi folk songs.

To sum up, although there are certain challenges for the acceptance of northern Shaanxi folk songs by the younger generation, we also see a ray of hope. Through innovative communication methods, integration of modern art forms, and enhanced education and training, we have reason to believe that the younger generation's knowledge and acceptance of northern Shaanxi folk songs will continue to improve, thus injecting new vitality into the inheritance and development of northern Shaanxi folk songs.

3. INHERITANCE AND DEVELOPMENT STRATEGY OF NORTHERN SHAANXI FOLK SONGS IN THE ERA OF BIG DATA

3.1. Innovative dissemination methods

3.1.1. Digital music platform promotion

Digital music platform promotion is one of the important strategies for the inheritance and development of northern Shaanxi folk songs in the era of big data. Through the digital music platform, northern Shaanxi folk songs can reach a wider audience and achieve cross-regional dissemination.

Firstly, northern Shaanxi folk songs can be heard by more people through major music platforms, such as QQ Music, Netease Cloud Music, Shrimp Music and so on. These platforms have a large user base and can provide sufficient exposure for northern Shaanxi folk songs [8]. Secondly, digital music platforms also provide personalised recommendation functions. By analysing users' listening preferences, the platforms can recommend similar Shanbei folk songs to users, thus increasing their chances of exposure. In addition, users can exchange discussions in the comment section and share their insights on northern Shaanxi folk songs, further promoting the dissemination of the songs. In addition, digital music platforms also provide distribution services to help promote northern Shaanxi folk songs. For example, the platform can produce exquisite covers for the songs, provide professional recommendation bits, and even organise online and offline activities to let more people understand and love northern Shaanxi folk songs [9]. At the same time, the digital music platform also supports original musicians to upload their works, providing support for the creation and inheritance of northern Shaanxi folk songs. Musicians can use the platform to get inspiration and feedback, and continuously optimise their works to make them more modern and attractive. In addition, the platform also provides a copyright protection function to ensure that the rights and interests of musicians are protected.

To sum up, the promotion of digital music platform provides new possibilities for the inheritance and development of Shaanxi folk songs in the context of the big data era. By making full use of the resources and advantages of the digital music platform, the folk songs of northern Shaanxi are expected to take on a new vitality and win the love of more listeners.

3.1.2. Network Short Video and Live Broadcasting

In the era of big data, network short videos and live broadcasts have become an important means for the inheritance and development of northern Shaanxi folk songs.

First of all, the network short video has a high degree of dissemination and visibility, can be sung, played and other forms of expression of northern Shaanxi folk song visual display to the audience, enhancing the audience's perception of northern Shaanxi folk song and identity. At the same time, the short video platform also provides interactive comments, likes and other functions, enabling the audience to participate in the dissemination process of northern Shaanxi folk songs in real time, further expanding its influence [10]. Secondly, live broadcasting, as a real-time interactive communication method, allows the audience to feel the charm of northern Shaanxi folk songs from a close distance. Through live broadcasting, the audience can communicate directly with the performers and understand the stories and history behind the folk songs of northern Shaanxi, thus deepening their

understanding of this traditional culture. In addition, live broadcasting can attract more viewers, especially the younger generation, and inject new vitality into its dissemination. In addition, online short videos and live broadcasts are able to provide economic support for the inheritance and development of Shaanxi folk songs. Through the platform of reward, advertising and other revenue methods, Shaanxi folk song performers can get a certain economic return, thus motivating them to more actively involved in the inheritance and innovation of traditional music. At the same time, short videos and live broadcasts can also attract the attention and support of enterprises, public welfare organisations and other social forces, providing more resources for the development of northern Shaanxi folk songs. However, we should also see the challenges faced by network short video and live broadcasting in the process of spreading northern Shaanxi folk songs. On the one hand, due to the real-time nature of live broadcasting, performers may make mistakes in the process of live broadcasting, affecting the dissemination effect of northern Shaanxi folk songs. On the other hand, the complexity of the network environment also allows the spread of some bad information, causing damage to the reputation and image of northern Shaanxi folk songs. Therefore, in the use of network short video and live broadcast dissemination of northern Shaanxi folk songs, we need to grasp the degree, not only to give full play to its advantages, but also to avoid falling into the dissemination of misunderstanding [11].

In conclusion, in the era of big data, network short video and live broadcasting provide new opportunities for the inheritance and development of northern Shaanxi folk songs. We should make full use of this new mode of communication, so that more people understand, love and inherit the folk songs of northern Shaanxi, so that it can be revitalised in the new era.

3.2 Education and Training

3.2.1. Integration into school music education

Integrating northern Shaanxi folk songs into school music education is an effective way of inheritance and development.

First of all, school music education is an important way to cultivate young people's musical literacy. By incorporating Shaanxi folk songs into the curriculum, students can be exposed to and understand this traditional art form from childhood. Teachers can introduce the historical background, musical characteristics and expression forms of northern Shaanxi folk songs in their teaching, so that students can have a deeper understanding of them[12] . Secondly, through school music education, students can be organised to participate in singing, playing and composing activities of northern Shaanxi folk songs. Students can experience first-hand the charm of northern Shaanxi folk songs through practical activities, increasing their interest in and love for this art form. Schools can also organise concerts and competitions to give students the opportunity to showcase their talents and encourage them to create new works of northern Shaanxi folk songs. In addition, school music education can also invite the inheritors or artists of northern Shaanxi folk songs to give lectures and performances on campus, so that students can have the opportunity to have close contact with professionals and further understand the artistic value and significance of the inheritance of northern Shaanxi folk songs.

In summary, the integration of Shaanxi folk songs into school music education not only helps to inherit and develop this traditional art form, but also helps to cultivate students' musical literacy and cultural awareness. Through the platform of school music education, it can provide the majority of young people with the opportunity to contact and learn northern Shaanxi folk songs, and make positive contributions to the inheritance and development of northern Shaanxi folk songs [13].

3.2.2. Provide professional training courses

In order to better inherit and develop northern Shaanxi folk songs, opening professional training courses is an effective strategy.

Firstly, the training courses can attract more people interested in northern Shaanxi folk songs, whether young people or traditional culture enthusiasts, and provide them with opportunities for systematic learning. Second, the training courses can invite experienced northern Shaanxi folk song singers and inheritors to serve as teachers and pass on their skills and knowledge. In addition, the training courses can provide students with hands-on experience of the charm of northern Shaanxi folk songs and improve their performance skills through practical lessons, such as group singing and stage performances. In addition, the training course can organise students to participate in competitions, seminars and performances of northern Shaanxi folk songs to provide them with a platform to display their talents and exchange learning. This will not only increase the students' stage experience, but also promote the dissemination and development of northern Shaanxi folk songs. At the same time, the training course can also co-operate with local schools, cultural institutions and other organisations to incorporate northern Shaanxi folk songs into the music curriculum, so that they can become the object of study for more people [14].

In conclusion, the opening of professional training courses can cultivate more talents for the inheritance and development of northern Shaanxi folk songs, and at the same time, it can also promote the dissemination and promotion of northern Shaanxi folk songs in a wider range of fields. Through the training courses, it can be expected that Shanbei folk songs will take on new vitality and vigour in the future inheritance and development.

3.3. Integration into Modern Art

3.3.1. Integration across art forms

In the era of big data, the inheritance and development of northern Shaanxi folk songs need to constantly try new ways, in which the integration of cross-art forms is an important strategy. This kind of integration can not only inject new vitality into northern Shaanxi folk songs, but also make more people understand and love this traditional art form. The integration of cross-art forms can be realised in many ways. For example, northern Shaanxi folk songs can be combined with modern music forms such as pop music, rock music and electronic music to create new musical works. This fusion can allow the melodies and lyrics of northern Shaanxi folk songs to complement the elements of modern music, thus attracting more young people. At the same time, this fusion can also allow modern music to absorb the elements of northern Shaanxi folk songs, thus enriching the connotation of modern music [15]. In addition, Shaanxi folk songs can also be combined with other art forms such as theatre, film and dance. For example, using Shanbei folk songs as background music in plays or movies, or integrating the lyrics of Shanbei folk songs into the dialogue of plays or movies. This kind of integration allows the audience to enjoy the drama or film while also being able to appreciate the beauty of Shaanxi folk songs.

The fusion of cross-art forms requires an open mind and innovative thinking on the part of the inheritors of Shanbei folk songs. Only by constantly trying new ways can the folk songs of northern Shaanxi Province shine in the new era. At the same time, the integration of cross-art forms also requires social support and recognition. Only when all aspects of society can support and participate in the inheritance and development of northern Shaanxi folk songs, can the northern Shaanxi folk songs truly achieve sustainable development [16].

3.3.2. Compose new northern Shaanxi folk songs

In the era of big data, in order to inherit and develop northern Shaanxi folk songs, creating new northern Shaanxi folk songs is an important strategy. The creation of new northern Shaanxi folk songs should not only retain the style and connotation of traditional folk songs, but also integrate modern aesthetics and elements to make it more contemporary and attractive.

First of all, the creation of new northern Shaanxi folk songs should deeply excavate and study the historical and cultural background of northern Shaanxi folk songs, and understand their unique

musical characteristics and forms of expression. Through the collation and study of traditional folk songs, inspiration and materials can be drawn from them to provide a basis for the creation of new northern Shaanxi folk songs. Secondly, the creation of new Shanbei folk songs can draw on and integrate modern musical elements and styles. This includes the use of modern music production techniques and instruments, as well as the combination of modern music styles such as pop, rock and electronic. In this way, the new Shaanxi folk songs can be made more modern and attractive, attracting the attention and love of more young people [17]. In addition, the creation of new Shaanxi folk songs can also pay attention to social hotspots and real problems, and express thoughts and care for society in the form of songs. By integrating social issues into the songs, it can make the new Shaanxi folk songs more contemporary and realistic, and cause more people's resonance and thinking.

Overall, creating new Shaanxi folk songs is an important way to inherit and develop Shaanxi folk songs in the era of big data. By retaining the traditional style and integrating modern elements and social issues, it can make the new northern Shaanxi folk songs not only inherit the essence of traditional folk songs, but also have a sense of the times and attraction, further promoting the development and dissemination of northern Shaanxi folk songs [18].

4. CASE ANALYSES

4.1. Introduction of Successful Cases

4.1.1. Case 1: a Shaanxi folk song digital promotion project

The digital promotion project of a northern Shaanxi folk song is an innovative project that aims to use big data and digital technology to promote the inheritance and development of northern Shaanxi folk songs. The project first collected a large amount of data on northern Shaanxi folk songs, including audio, video, lyrics, etc., through online platforms and field research, and through data mining and analysis, understood the characteristics of the dissemination of northern Shaanxi folk songs and the needs of the audience.

Based on the results of data analysis, the project team adopted a series of inheritance and development strategies. Firstly, they cooperated with digital music platforms and uploaded northern Shaanxi folk songs to the platforms, so that more people could have access to these excellent traditional music. At the same time, they also demonstrated the charm of northern Shaanxi folk songs through online short videos and live broadcasts to attract more young people's attention and participation [19]. In addition, the project team cooperated with schools and educational institutions to integrate northern Shaanxi folk songs into school music education and to cultivate the younger generation's interest in and love for northern Shaanxi folk songs. They also opened professional training courses to attract people with a passion for northern Shaanxi folk songs to learn and pass them on. Through these efforts, the project has achieved remarkable results. The dissemination of northern Shaanxi folk songs has been expanded and the audience has increased. At the same time, the success of the project has also provided lessons and references for traditional music in other regions, and has an important demonstration role for the inheritance and development of traditional music.

In conclusion, a project to digitally promote northern Shaanxi folk songs is a successful case, which uses big data and digital technology to promote the inheritance and development of northern Shaanxi folk songs, and provides new ways and means for the dissemination of traditional music. Its success also provides lessons and references for traditional music in other regions, and is an important demonstration for the inheritance and development of traditional music [20].

4.1.2. Case 2: Network Performance of a Shanbei Folk Song Art Group

Case 2 involves an organisation called "Shaanxi Folk Song Art Group", which has conducted a series of performances on the network platform, attracted a large number of audience attention, and achieved significant communication effects.

The performances were mainly conducted through a live video platform, in which the group retained the traditional elements of northern Shaanxi folk songs, such as local dialects and folk instruments, and incorporated modern musical elements, such as the arrangement style of popular songs, to give the performances a more contemporary feel. At the same time, the performance also included explanations and interactive sessions, allowing the audience to better understand the historical background and cultural connotations of northern Shaanxi folk songs, and improving the audience's understanding and love of northern Shaanxi folk songs.

Through the live webcast, the performances of the northern Shaanxi folk song art groups covered audiences across the country and even around the world, expanding the influence of the northern Shaanxi folk songs. During the performance, there was frequent audience interaction and positive feedback from the pop-up and comment sections, showing the gradual increase in the acceptance of northern Shaanxi folk songs by young audiences. In addition, the performance attracted the attention of some professional musicians and industry insiders, who spoke highly of the performance and shared and forwarded it on online platforms, further promoting the spread of northern Shaanxi folk songs.

The network performance not only enhanced the visibility of the northern Shaanxi folk songs, but also brought economic benefits for the art group. During the performance, the art group received financial support through online crowdfunding, virtual gifts and other forms, which enabled the performance to continue. At the same time, the performance also attracted commercial sponsorship, which provided more development space for the art group.

In summary, the network performance of a Shaanxi folk song art group has achieved a good inheritance and development effect in the context of the big data era. By innovating the performance form, integrating modern elements and strengthening interactive communication, this case provides a useful reference for the dissemination of northern Shaanxi folk songs. In the process of inheritance and development in the future, similar network performance activities are expected to continue to play a positive role in promoting northern Shaanxi folk songs to a broader stage.

4.2. Lessons Learnt from Successful Cases

Through the research on the inheritance and development of northern Shaanxi folk songs in the era of big data, we can learn from some successful cases.

First, digital promotion projects have achieved remarkable results in spreading northern Shaanxi folk songs. For example, a digital promotion project for northern Shaanxi folk songs has greatly expanded the dissemination of northern Shaanxi folk songs through the establishment of online music platforms and social media accounts. This approach not only attracted the attention of more young people, but also promoted the integration of traditional folk songs with modern technology. Second, online performances have also played an important role in the inheritance and development of northern Shaanxi folk songs. By performing live on an online platform, a northern Shaanxi folk song art group not only lets the audience feel the charm of northern Shaanxi folk songs, but also promotes the interaction between the artists and the audience. This online performance mode provides a new way for the dissemination of northern Shaanxi folk songs, allowing more people to participate in the folk song heritage. In addition, the experience of the success stories is reflected in the innovative education and training methods. Integration of northern Shaanxi folk songs into school music education has enabled the younger generation to be exposed to this traditional art form in the learning process. At the same time, professional training courses have been opened and experienced folk artists have been invited to teach their skills, cultivating a group of new forces for the inheritance of northern Shaanxi folk songs.

In summary, the era of big data provides new opportunities for the inheritance and development of northern Shaanxi folk songs. Through innovative communication methods, integration of modern art and education and training, we can stimulate the new vitality of northern Shaanxi folk songs and

make them shine in modern society. At the same time, we should also pay attention to the needs of the younger generation, so that they can become an important force in the inheritance and development of northern Shaanxi folk songs. Only in this way can Shanbei folk songs continue to prosper in the new era and add more splendour to the musical and cultural treasures of the Chinese nation.

5. CONCLUSION

The era of big data provides new opportunities and challenges for the inheritance and development of northern Shaanxi folk songs. We have seen the current situation as well as the problems and challenges of northern Shaanxi folk songs through the background analysis of the big data era. However, we also see that the era of big data brings new strategies and methods for the inheritance and development of northern Shaanxi folk songs. Innovative communication methods, integration of modern art and education and training, as well as the experience of successful cases, all provide new ideas for the inheritance and development of northern Shaanxi folk songs.

The arrival of the big data era has made the dissemination of information more rapid and widespread, which is a rare opportunity for the dissemination of northern Shaanxi folk songs. We can make more people understand and come into contact with northern Shaanxi folk songs through new communication channels such as digital music platforms, online short videos and live broadcasts, thus expanding their influence. At the same time, we can also collect more data about northern Shaanxi folk songs through online platforms in order to better understand their communication effects and audience feedback. In addition, we should also see that the era of big data also brings certain challenges. The traditional way of transmission may be in trouble when facing the new communication environment. The acceptance of young people may also be affected. Therefore, we need to innovate communication methods, integrate modern art, and create new Shaanxi folk songs to attract more young people. At the same time, we should also strengthen the education and training of northern Shaanxi folk songs, integrate them into school music education, and open professional training courses to cultivate more talents in singing and creating northern Shaanxi folk songs.

Overall, the era of big data provides new opportunities and challenges for the inheritance and development of northern Shaanxi folk songs. We should grasp this opportunity, innovate communication methods, integrate modern art, and strengthen education and training in order to achieve sustainable development of northern Shaanxi folk songs. Let's expect the northern Shaanxi folk songs to blossom more brilliantly in the future development.

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