

Research on the Methods of Promoting the Spread of Sports Culture in Colleges and Universities under the Internet

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Abstract. With the development of network information technology, the Internet has become an important means of information dissemination, and the "Internet +" model has become a new channel for information dissemination in the new era. This mode of communication has penetrated into all aspects of social life, and has also brought new opportunities for the dissemination of sports culture. For this reason, the dissemination of sports culture should actively adapt to this network communication method, form a "Internet + sports culture" sharing model, enhance the influence and radiation scope of sports culture communication, and then enhance the competitiveness of sports culture communication. This article first analyzes the current research status of cultural communication at home and abroad, and finds that the current cultural communication mostly uses qualitative analysis methods, while quantitative analysis methods are less used. For this reason, it is proposed to use neural network algorithm to carry out cultural fusion propagation research. Aiming at the complicated operation of current neural network algorithm, a neural network algorithm based on genetic algorithm is constructed. Based on this, the article discusses the sports culture communication strategy under the background of the Internet, in order to have a positive impact on the communication of sports culture.

Keywords: media communication; neural network algorithm; genetic algorithm; sports culture.

1. The significance of sports culture communication

General Secretary Xi clearly pointed out in the report of the 19th National Congress of the Communist Party of China that "culture is the soul of a country and a nation. Culture rejuvenates the country and the nation is strong. Without a high degree of cultural self-confidence, without cultural prosperity, there would be no China. The great national rejuvenation". It can be seen that culture is an inexhaustible driving force for the development of a nation, and an important aspect of a comprehensive social influence. It has a continuous, deep and extensive influence and has a positive effect on the development of a nation and society. For this reason, it is of positive significance to create a new cultural highland and to innovate the means of cultural dissemination. As an important part of culture, sports culture has an important influence on the development of sports career and sports industry. Especially in the context of the Internet, with the increasing exchange and collision of international cultures, it has brought opportunities and challenges to the development of sports culture in my country. Enhancing the effect of sports culture dissemination and innovating sports communication strategies can better increase the influence and competitiveness of sports culture, and have a significant role in promoting the development of sports culture in China^[2-5]. From the perspective of national fitness, physical exercise and sports culture have become an important part of people's lives and have gradually penetrated into social life, and the communication of sports culture has also played an important role in the development of sports-related fields. The influential power can make the public understand the positive meaning of sports activities, sports events and sportsmanship, and in turn can influence more people to participate in sports. At the same time, the dissemination of sports culture has increased people's sense of identity and pride in sports culture, which will also promote the inheritance and promotion of sports culture, enhance the country's overall strength, and enhance its international status. In the Internet age, sports culture realizes the organic combination of traditional media and new media, promotes the innovative development of sports culture communication methods, and creates a more timely and communicative communication method, which can better realize the widespread dissemination and sustainable development of sports culture.

2. The dissemination method of sports culture in the Internet era

The development of the Internet has innovated the way of dissemination of sports culture, especially in the context of the highly developed network technology, the progress of network technology has promoted the prosperity and development of self-media and converged media, making the way of dissemination of sports culture changed from traditional to digital development. At this stage, the most common media for sports culture communication mainly include television, newspapers, radio, and network media.

(1) Television transmission. Television communication is the most widely used and most common method in traditional media. Under this kind of media communication method, sports culture has a huge audience base. Of course, this is also the most acceptable way for the public, and it has become an important channel for people to learn about various sports activities, sports events and sports news. Under the influence of the Internet, the way of TV communication is also undergoing subtle changes. TVs are smarter, and people have more choices in understanding sports culture-related knowledge. For example, watching sports events is no longer restricted by time and can be played repeatedly. Television communication is still one of the most important ways of dissemination of sports culture.

(2) Newspaper dissemination. Newspaper dissemination is also a form of sports culture dissemination, but this mode of dissemination is not as wide as television dissemination. However, it needs to be pointed out that under the influence of the development of the Internet, newspapers and periodicals should have two levels of meaning. One is traditional paper newspapers.

Journals, one is digital newspapers. At this stage, digital newspapers and periodicals are showing a trend of high development, and online sports newspapers and periodicals are beginning to be seen by the public. People's subscription to newspapers and periodicals is showing a diversified trend, which makes the acquisition of sports information timelier, which is also very important for the dissemination of sports culture.

(3) Network media communication. With the development and progress of the Internet, the Internet has formed a highly integrated development model with sports, and network media has further enriched sports communication channels and methods. For example, sports websites and forums have become the main communication media for sports fans. In addition, new media such as We Media, Fusion Media, and APP are also blooming and contending, greatly enriching the dissemination of sports videos, audios, pictures and news. At the same time, sports audiences can learn about sports dynamic information in the first time and synchronously through network media, making the dissemination of sports culture more interactive, dynamic and timely. Internet media has become an important way for the general public to accept sports culture, understand sports spirit, and enjoy sports culture.

3. Improved neural network algorithm

BP neural network algorithm is an important model in neural network algorithm, which is widely used in image recognition, intelligent control, data processing and other fields. Figure 1 is a schematic diagram of the BP neural network algorithm structure^[11-15].

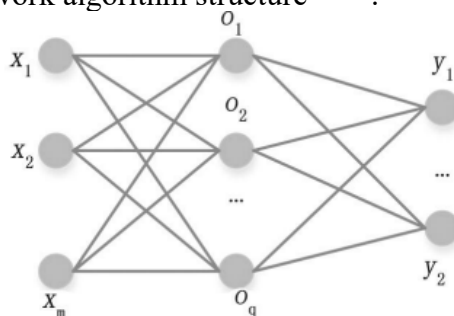


Figure.1 BP neural network

In the neural network algorithm, there are m neurons in the input layer, n neurons in the output layer, and q neurons in the hidden layer. It is assumed that there is a threshold θ_{iy} in the hidden layer and other neuron thresholds can also be called. Thus $w_{i0} = b_i$.

Assuming that $x_1=0$ in the input layer, the total output result of the i -th neuron in the hidden layer is:

$$P_i = \sum_{j=0}^m w_{ij}x_j$$

The error calculation of the neural network algorithm is $e=d_i-y_i$, and the total output error is:

$$E = \frac{1}{2} \sum_{j=0}^n |e|$$

4. Improved neural network algorithm in the application of sports culture and media communication

This paper investigates the sports culture in colleges and universities and analyzes the data, and uses the improved neural network algorithm to conduct multimedia cultural communication research. The sample data sets in this article mainly include: ① Investigate the ways of sports culture transmission, using Tencent Cloud questionnaire survey system to conduct file surveys; ② Analyze the data, and conduct statistical analysis according to occupation, unit, age, region, and cultural transmission methods. A total of 300 questionnaires were issued for this survey, and 296 valid questionnaires were returned, with a recovery rate of 98.67%, which meets the needs of the questionnaire. The results of this questionnaire survey show that the proportion of men who understand the culture of sports communication accounted for 63.2%, which is higher than that of women, indicating that men are curious about sports culture. In terms of units, the proportion of personnel in public institutions is 23.45%, private enterprises 12.34%, state-owned enterprises 20.32%, and self-employed personnel accounted for 43.89%. According to the survey data, the proportion of freelancers is the highest, followed by public institutions, and they have enough Time for cultural dissemination. The analysis of age data shows that the proportion of people aged 18-28 is 32.14%, those aged 29-38 accounted for 12.45%, those aged 49-58 accounted for 34.56%, and those aged over 59 accounted for 0.85%. The data results show that the proportion of persons aged 49 to 58 is the highest, which is related to the personnel environment at this stage. The results of the regional cultural survey showed that the northern region accounted for 32.34%, the southern region accounted for 12.56%, the western region accounted for 10.43%, and the eastern region accounted for 44.67%. The data shows that it is directly related to regional economic development. The cultural communication methods mainly include mobile APP promotion, newspaper promotion, TV promotion, SMS promotion, and online promotion. The proportions are 30.67%, 8.34%, 10.32%, 12.45%, and 38.22%, respectively, indicating that online promotion is the highest.

5. Conclusion

In the context of the Internet, the dissemination of sports culture should make full use of the characteristics of Internet communication, give full play to the advantages of sports culture, innovate the form of sports culture dissemination, and form resource sharing. On the one hand, it is necessary to create a mode of interaction and integration of traditional media and new media, create an "Internet + sports culture" approach, and form a diversified communication channel; on the other hand, it is necessary to adhere to the people-oriented communication concept, and focus on the optimization and expansion of content and form. The scope of sports culture dissemination, thereby enhancing the effect of sports culture dissemination. This paper analyzes the current traditional methods of cultural

integration at home and abroad, and it is found that mobile networks have an impact on cultural integration. In order to study the cultural fusion method in detail, a neural network algorithm based on genetic algorithm is proposed. The idea of this algorithm is to use the heritage algorithm to solve the initial value of the neural network algorithm, which reduces the complexity of the neural network algorithm and combines the genetic algorithm and the neural algorithm. Fusion together to eliminate each other's defects, to achieve an increase in the efficiency of the algorithm. Taking the survey data of sports culture as the object, the research results show the influence of occupation, unit, age, region, and cultural dissemination method on sports culture dissemination. The improved neural network algorithm is used for data analysis, and the results show that the accuracy of the algorithm is improved compared with the classic neural network algorithm. The application of this algorithm can promote the spread of sports culture.

Reference

- [1] Analysis on the Communication Strategy of Sports Commentary in my country from the Perspective of Cultural Confidence[J]. Feng Mengyuan. Media Forum. 2020(05)
- [2] A brief analysis of national sports culture communication strategies and paths under the background of Internet + [J]. Li Xin. China Nationalities Expo. 2019(16)
- [3] Talking about media-based sports communication and its influence on sports culture communication [J]. Ye Huimin, Xu Jun. Sports Science and Technology. 2019(06)
- [4] Research on the Spread Effect and Development Suggestions of Guangxi Minority Traditional Sports Culture from the Perspective of Cultural Confidence[J]. Chen Qiang. Sports Fashion. 2018(05)
- [5] The new strategy of Daur national sports culture dissemination in the era of "Internet +"[J]. Ma Yang, Zhang Liangxiang. Sports. 2017(06)
- [6] Liaoning marine sports culture communication and development path analysis under the background of new media[J]. Wang Huiming, Jiang Nan. China Market. 2016(34)
- [7] Innovative strategies for the dissemination of minority sports culture [J]. Liu Tianyu. Youth Reporter. 2016(14)
- [8] Water demand forecast of orchard based on GA-BP neural network[J]. Liu Hongshan, Wang Weixing, Sun Daozong, Gao Peng, Chen Wenbin, Lin Chuting, Xie Jiaying. Journal of Drainage and Irrigation Machinery Engineering. 2020(12)
- [9] Research on the Ways of Dissemination of Traditional Culture in Colleges and Universities in the New Media Era[J]. Yu Yue, Zhang Hai. China Publishing. 2020(05)
- [10] Visualized media image of traditional cultural communication under the perspective of new media[J]. Wang Xiuli. Contemporary Communication. 2019(05)
- [11] The application and reflection of smart technology in traditional cultural dissemination: based on the investigation of Laswell's 5W model [J]. Nie Wei. Sichuan Drama. 2019(01)
- [12] Research on the New Path of Chinese Ancient Books Reading and Traditional Culture Dissemination under the Background of "VR+Culture"[J]. Zhang Ning, Long Lesi, Li Junyang. Library Construction. 2019(06)
- [13] The exploration and innovation of TV programs in the dissemination of traditional culture[J]. Liu Xiaolan. Youth Reporter. 2018(15)
- [14] Traditional cultural communication logic and strategy from the perspective of mobile communication[J]. Yan Qing. Theory Monthly. 2018(04)
- [15] The protection and expansion of historical and cultural cities—the historical and cultural characteristics of Yongzhou and the construction of urban culture[J]. Xiao Yong. Modern City Research. 1999(04)