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Retraction

Retracted: The Dissemination Mode of External Intelligence of Archery Culture Based on the Particle Swarm Algorithm

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] Y. Xue, "The Dissemination Mode of External Intelligence of Archery Culture Based on the Particle Swarm Algorithm," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 1518177, 10 pages, 2022.

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Research Article

The Dissemination Mode of External Intelligence of Archery Culture Based on the Particle Swarm Algorithm

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To study the archery culture based on the particle swarm algorithm, the dissemination mode of external intelligence is differentiated. Firstly, the algorithm based on a particle swarm is introduced, and the external intelligence dissemination mode is distributed. Then, taking the spread of archery as the research object, mainly using questionnaires and other methods, from the perspectives of intelligent differentiation, organizational communication, and mass communication, we investigated and analyzed the dissemination activities of archery. Finally, the relevant countermeasures to promote the spread and development of archery are summarized and put forward. The experimental results show the following: the process of interpersonal communication of archery has the characteristics of many channels of information transmission, flexible methods, and strong interaction; the leadership of elite archers and the interpersonal communication of archery played a good role in promoting. Dissemination of external intelligence and mass dissemination, in the process of human-to-human communication of archery, have the same significance.

1. Introduction

Chinese archery has a long history and rich content and contains a lot of historical and cultural information, not only having sports value, and it has been studied for thousands of years, a typical and vivid example of China's multiethnic cultural exchange and integration. In the colorful world of archery, Chinese archery can be said to be unique in its own field; therefore, more and more scholars at home and abroad pay more and more attention; many people have devoted themselves to the exploration of its historical origin and the research on the actual situation and have produced many meaningful results. As we all know, China is one of the first countries in the world to invent the bow and arrow; the stone arrowhead found at the Zhiyu site in Shuo County, Shanxi Province, proved that the Chinese at least in the late Paleolithic are already using bows and shooting arrows as a hunting tool and as a weapon of human conflict. Therefore, in ancient Chinese legends, the possession of bows and arrows is regarded as one of the symbols of the beginning of Chinese civilization [1]. Among the numerous rock paintings in the north, such as the famous Yinshan Rock Painting, Helan Mountain rock painting and Altai rock painting in Xinjiang, it can be clearly seen that our ancestors created exquisite composite bows as early as the Neolithic age three generations or three generations ago. Its curved, elegant and full of tension bow body shows that the Chinese people have been far sighted and innovative in the design and production of bow from the beginning, showing unparalleled intelligence and originality. A large number of bronze arrowheads were unearthed from the Terracotta Warriors and Horses of Qin Shihuang; not only are they as sharp as new but also the size and weight are exactly the same; archaeologists believe that they were made according to uniform requirements; it is a "standardized" product. This further shows that our ancestors made bows and arrows, attentively and meticulously, in order to achieve perfection, making the most of its usefulness. Long-term practice has accumulated rich experience, and experience has been upgraded to theory and law, which has been officially recorded; it has become the norm to be followed by the craftsmen of the official workshop. As early as the Eastern Zhou dynasty, China produced the "Bowman is the Bow" with a length of more than 1,180 characters in "Zhou Li·Kaogongji"; this is the standard

and regulation of bow and arrow production in Qi State in the spring and autumn period; some scholars say that it is a detailed summary of pre-Qin bow-making technology, "an excellent scientific and technological paper" [2]. Bows and arrows are the most powerful weapons in the cold weapon era; it is also the most important tool in hunting production (Figure 1). At the same time, the mastery and improvement of archery skills require certain physical conditions and technical training, and the practice of training and archery will certainly contribute to the enhancement of physical fitness. Such an obvious causal relationship between the two was realized by the ancients very early and summed up and formed theories in the passage from generation to generation; it also gave birth to professional shooters and the breeding and spread of different genres. More importantly, the ancient Chinese loved bows and arrows so much; in various archery activities, the cultural connotation of archery activities has been continuously deepened and extended, gradually endowing it with many social functions such as education, sports, entertainment, and communication, and a series of systems are formed for archery etiquette, spare materials, decoration, admiration, gifts, competitions, examinations, etc.; there are also a large number of related literary and artistic creations, which constitute a colorful "shooting culture system," developing into a broad field of special knowledge—radiology. During a long historical period, archery is the quintessence of Chinese martial arts, which can be seen very clearly in the existing classical martial arts literature [3].

Therefore, enhancing China's archery and foreign cultural communication is a key step to improve China's cultural soft power; it is also to expand the influence of China among the people and friendly people from all over the world, which is the only way to eliminate the adverse effects of distorted attacks such as "demonization" and "China's prejudice." There is a long way to go to improve China's ability to communicate foreign culture, and it is imminent to strengthen the strategy of China's foreign culture communication.

2. Literature Review

Bouraine et al. believe that traditional culture, as the root of national cohesion, is a cultural concept that a nation has gradually created, developed and continued to the present in the long history, and will have an impact on the cultural construction of the nation in the future [4]. Wang and Tang believe that mining the modern value of traditional culture is a huge driving force for enhancing national cohesion and promoting national rejuvenation. "Archery," as one of the ancient traditional "six arts," is not only a sport but also a martial art and a culture [5]. Research by Kitamura and Hirashima found that during the Han dynasty, a variety of "shooting art" activities appeared; from the side, it can be inferred that its mass base is good, its entertainment is strong, and there are many people playing; as a result, a variety of "shooting art" activities have emerged. And from the process of the spread and development of China's traditional "archery" culture, you can also see its own entertainment and diversity. For example, in classic film and television works such as "The Legend of the Condor Heroes," a large number of "archery" elements are introduced; the "archery" culture and art are perfectly combined to attract the masses [6]. Nanda and others believe that the traditional "archery" culture contains traditional Chinese Confucianism, Taoism, Buddhism, and other ideas; it is a cultural resource with a variety of values, rich in creativity, whether it is competitive or entertaining. In terms of entertainment, first of all, in order to meet the needs of most people now, the traditional "shooting art" culture can be combined with animation culture, creating "architectural animation." Secondly, using online games and live broadcasts, design online games with "archery" culture and "archery" skills as the connotation, and broadcast them live. Finally, take the popular outdoor games as a breakthrough to develop a survival game that simulates the original "shooting art era" [7]. Liu and Huo believe that on the basis of reviewing the concepts of media effect and external communication, supported by the theory of media "use and satisfaction," they can understand the use and evaluation of media by foreigners in China through the investigation of the current situation of media use by foreigners in China. The survey found that among the eight major media categories, foreigners in China have the largest access to "soft news," with the home country media or the mother tongue media established by the home country people in the home country, and the use of English media is also very common. In particular for the selection of news access channels for emergencies, foreign media have an absolute advantage. Therefore, after the Chinese return to China, they will choose a variety of "over the wall" methods; free use of the network is achieved through a proxy server or software [8]. Li et al. in "Problems and Countermeasures of Chinese Culture's Foreign Dissemination" in the article "Research Based on Cultural Hierarchy" analyze the existing problems of Chinese culture's foreign dissemination, mainly including the following: the content level is low and the proportion is not coordinated, the international competitiveness of culture is not strong, and the international recognition of the culture is low. They also noted the influence on the economic benefits and values of cultural products in the current cultural communication [9]. Xu and others believed that Professor Zhang Xiping mentioned in the book "General Introduction to Chinese Culture Going Global" that, at present, the forms and channels of Chinese culture's external dissemination are diverse; it mainly includes "philosophy and social sciences, culture and art, Chinese language education, cultural industry foreign trade, radio, film and television, press and publication, etc." [10]. Dillenbourg proposed a particle swarm optimization algorithm based on the topology structure of the age group. Age refers to the algebra of self optimizing particles that are not updated. The older the particles are, the longer the self optimizing particles are not updated, the better [11]. Liang et al. used k-means clustering to construct subgroups and then combined the global optimum and neighborhood optimum of pSO to replace the global optimum in the pSO update equation [12].

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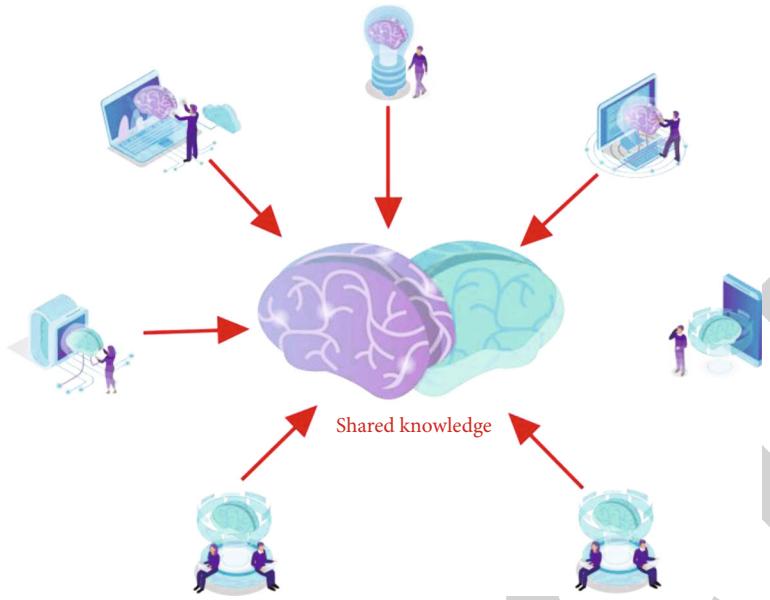

Figure 1: Mass communication.

3. Basic Principles of Particle Swarm Optimization Algorithm

The traditional particle swarm algorithm idea is as follows: set in the dimensional target search space, there are m particles forming a group; then, the particle i can be represented as a S-dimensional vector $Xi = (Xi_1, Xi_2, Xi_n), 1, 2, m$. Similarly, every particle in a population can be represented in the same way; the position of each particle is a feasible solution. The fitness value of each particle is calculated by its preset objective function, and the position of the particle is measured according to the fitness value. The flying speed of the i-th particle in the search space is also a S-dimensional vector, denoted as $V = (V_1, V_2, V_s)$. In addition to the particle's flight position and flight speed, two important pieces of information also need to be recorded: the optimal position searched by the i-th particle so far is $P_{\text{bestS}} = (P_{\text{best1}}, P_{\text{best2}}, P_{\text{best3}})$ and the optimal position searched by the entire particle swarm so far is $G_{\text{bestS}} = (G_{\text{best1}}, G_{\text{best2}}, G_{\text{best3}})$. Let $f(x)$ be the objective function; the current best position of the particle is determined by the following formula:

$$p(t+1) = p_i t, \quad \text{if } f(X_i(t+1)) \geq f p_i(t), \tag{1}$$

$$p(t+1) = X_i(t+1), \quad \text{if } f(X_i(t+1)) \leq f p_i(t). \tag{2}$$

The particle flight iteration on this basis is a two-step operation: position movement and speed change; the basic iterative formulas are

$$v(t+1) = v(t) + c_1 \cdot (G_{\text{best}} - \text{present}) + c_1 \cdot (P_{\text{best}} - p(t)), \tag{3}$$

$$x(t+1) = x(t) + v(t+1). \tag{4}$$

Among them, the learning factors c_1 and c_2 are nonnegative constants, c_1 adjusts the step size of the particle flying to its own best position, c_2 adjusts the step size of the particle flying to the direction of the global best position [13, 14].

Usually, x_i represents the current position of the i-th particle, V_i represents the current velocity of the i-th particle, indicating the optimal position searched by the entire population. And P_{best} represents the optimal position searched by the ith particle, and G_{best} is the optimal solution of the problem; that is, the pros and cons of the particle position are determined by the value of the objective function of the optimized problem, denoted as $f(x_i)$.

Therefore, the basic principle of particle swarm optimization algorithm can be expressed as follows.

First, the position and velocity of each particle are randomized, and in subsequent iterations, the particle updates itself with both historically optimal information. The first is the optimal position found by the particle itself, referred to as the individual best (particle best, p_{best}), and the second is the optimal position found by the entire population, referred to as the global best (global best, g_{best}). So, in the target search space with dimension D, randomly initialize a particle swarm consisting of N particles; then, the position of the i-th particle is a D-dimensional vector expressed as

$$X_i = (x_{i1}, x_{i2}, \cdots, x_{id}), \quad i = 1, 2, \cdots, N. \tag{5}$$

The velocity of the i-th particle is also a D-dimensional vector expressed as

$$V_i = (v_{i1}, v_{i1}, \cdots v_{i1}), \quad i = 1, 2, \cdots, N. \tag{6}$$

The optimal position searched by the i-th particle so far is called the individual optimal, which is expressed as

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$$P_{\text{best}} = (p_{i1}, p_{i2}, \cdots p_{id}), \quad i = 1, 2, \cdots, N. \tag{7}$$

The optimal position searched by the entire particle swarm so far is called the global optimal, which is expressed as

$$G_{\text{best}} = \left(p_{g1}, p_{g2}, p_{gd}\right), \quad i = 1, 2, \cdots, N. \tag{8}$$

In the search space, particles update their velocity and position according to the following iterative formula:

$$V_{id}^{1} = V_{id} + c_1 r_1 (p_{id} - x_{id}) + c_2 r_{12} \left(p_{gd} - x_{id}\right). \tag{9}$$

In the formula, $c_1 c_2$ is the learning factor and $r_1 r_2$ is the uniform random number in the range of $[0, 1]$.

After obtaining the latest position of the particle [15], the corresponding function value can be obtained according to the objective function $f(x)$ and update the individual optimal position information P_{best} of the particle and the historical optimal position information G_{best} of the entire population.

On the basis of the basic particle swarm optimization, the inertia weight w is introduced; it is the standard particle swarm algorithm, which is also the main difference between the basic PSO algorithm and the standard PSO algorithm. The main function of inertia weight is to adjust the global search ability and local optimization ability of the algorithm.

$$V_{id}^{1} = wV_{id} + c_1 r_1 (p_{id} - x_{id}) + c_2 r_{12} \left(p_{gd} - x_{id}\right). \tag{10}$$

w and v together determine the balance between the global search ability and the local optimization force of the algorithm. The larger the value, the more the algorithm inherits from the previous speed; the algorithm has strong global search performance. Otherwise, it has strong local optimization performance [16, 17].

(1) The basic process of particle swarm optimization algorithm

The flowchart of the particle swarm optimization algorithm is shown in Figure 2. The specific process is detailed as follows:

(1) Initialize the number of particles N, the position x_i, and velocity v_i of each particle

(2) The fitness value of each particle is calculated according to the fitness function

(3) For each particle, the fitness value is compared to the individual optimal value, and if the fitness value is greater than the individual optimal value, it is replaced

3.1. Intelligent Communication Platform and Focused Communication Mode. From the perspective of communication, the international communication of Chinese culture is because it has several theoretical communication elements: disseminator, communication content, communication mode, communication carrier and audience. The process of external communication of contemporary culture is actually the process of improving the international influence of contemporary Chinese culture, that is, communicators use Chinese culture to act on foreign audiences and carriers through certain ways, means and channels. The process of shaping and changing the audience's thoughts and behaviors, as far as its purpose is concerned, is to shape China's good national image and obtain the recognition of a wider international audience. Therefore, whether from the selection of Chinese cultural communication content, the communication process or the expected final effect, the audience is the key to the whole process of Chinese cultural external communication. Whether it can meet the needs of the audience, obtain the understanding, support and attract the active participation of the audience is related to the final effect of this process [18]. Due to the lack of audience analysis and effect feedback, China's external cultural communication system basically deviates from the linear communication mode and borrows Laswell's communication model, as shown in Figure 3.

The significant disadvantage of this linear chain lies in the starting point, the end points are separated at two ends, and there is also a lack of connection between each link, and for any form of communication, especially cross-cultural international communication, audience and effect should be the starting point of communication. Moreover, due to the particularity of the audience of cross-cultural communication, the consideration of the audience should appear in every link of the dissemination process.

The author combines the status quo of Chinese culture's external dissemination and the process of dissemination and the links between the various communication elements and constructed the audience-centered 6R culture external dissemination ring structure shown in Figure 4; the significance of the ring mode is to emphasize that in the external dissemination of Chinese culture, the communicator chooses the close connection between the transmission path, transmission channel, transmission mode, and other elements. The center of the ring model is audience analysis, and its significance lies in emphasizing every link in the process of foreign cultural dissemination in China; audience analysis plays an important role in improving the ability of cultural communication to the outside world; it is to start from the characteristics of the audience, improve the strategy selection of each communication link, pay attention to the feedback of the audience's communication effect, and constantly innovate the communication method [19].

The intelligent communication platform makes personalized recommendations based on user characteristics, scenarios, and article characteristics, realizing that different users receive different recommended content. Effectively solve the contradiction between massive information and user need personalization and customization.

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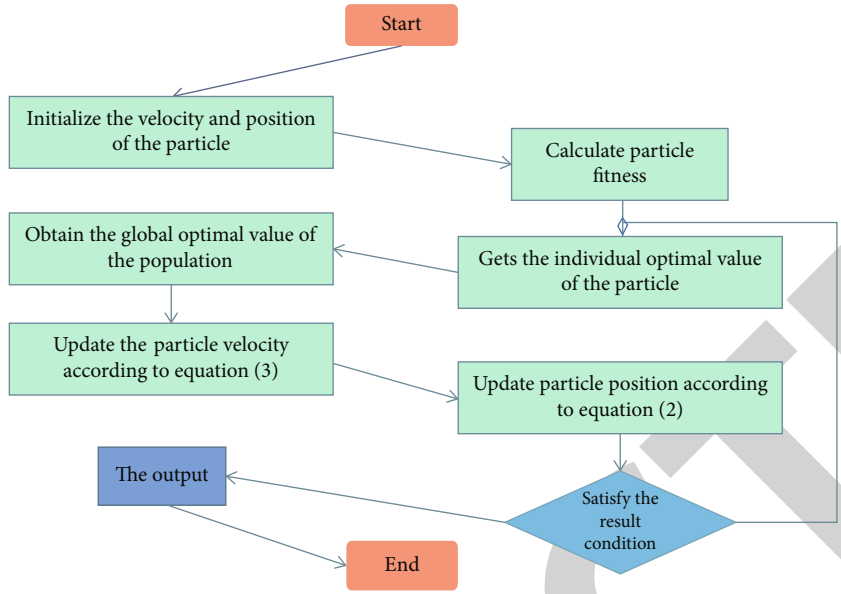

Figure 2: PSO algorithm flowchart.

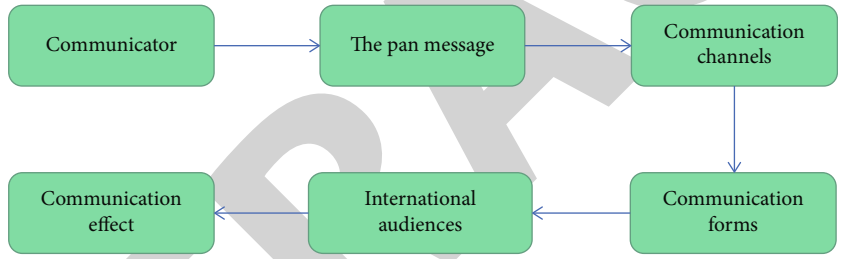

Figure 3: Linear cultural communication model.

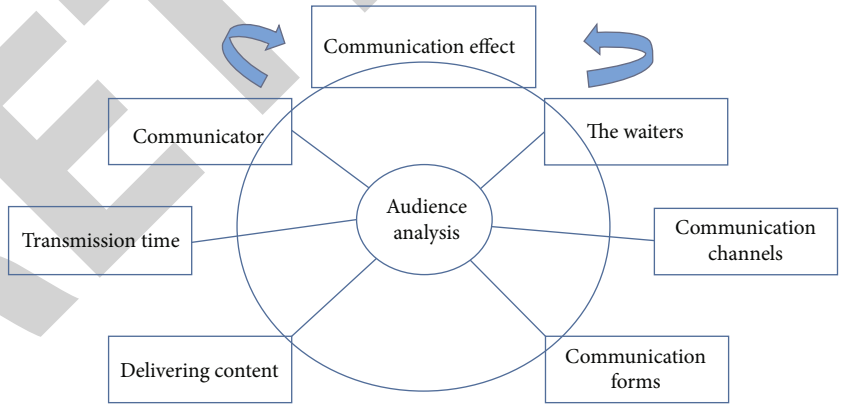

Figure 4: Structure diagram of 6R culture's external dissemination.

With the acceleration of the media integration process, new media technologies emerge in an endless stream; the trend of audience differentiation is becoming more and more obvious. The development model of the audience differentiation model is divided into 4 stages, as shown in Figure 5.

Today, the decentralized dissemination of archery culture is mainly reflected in the fourth stage—split mode. That is, with the acceleration of the media convergence process and the development of new media technology, audiences can more freely choose information content and actively interact with the media. Audiences are spread across different media in different ways, even within the same medium, pushing different messages to different audiences.

The differentiated dissemination of archery culture is for the needs of the masses, based on the individualized and differentiated needs of the audience, in order to the greatest

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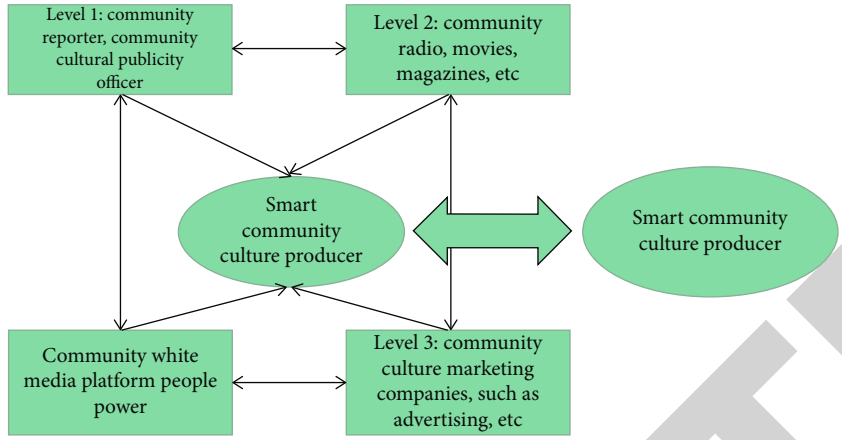

Figure 5: The four stages of audience differentiation.

Table 1: How people choose to transmit information when shooting arrows.

Way of conveying information	Number of people	Proportion (%)
Action	117	63.58%
Language	34	17.02%
Eyes	18	9.18%
Expression	8	4.91
Other	7	3.26

Table 2: The choice of conveying information during the rest of archery activities.

Way of conveying information	Number of people	Proportion (%)
Action	171	91.79
Language	7	3.27
Eyes	4	1.56
Expression	3	1.19
Other	2	1.09

extent possible to provide specific traditional cultural services that meet the needs of the above groups. Realize the precision of traditional culture dissemination. The development of new media technology has brought about an information explosion. How to accurately convey effective information to the audience. The solution is to "segment the audience market, create media content that suits the needs of different audience groups, and on the one hand become bigger and stronger and gain a firm foothold in the fierce media competition."

4. Experimental Analysis

4.1. Experimental Objects and Methods

(1) Research objects

The author takes 9 organizational managers, 20 athletes, and 200 participants in archery from a foreign university as the research objects.

(2) Research methods

According to the needs of the subject, author uses journals, the Internet, collections of papers, etc. and extensively consults, collects, and organizes information on the dissemination and development of archery, as well as relevant research literature on this topic; it provides a reference for the author's research. The author designed a questionnaire on the dissemination of archery sports and conducted a local field survey. The questionnaire adopts the expert evaluation method, and experts from sports were invited to analyze and evaluate the content of the questionnaire; among them, there are 3 professors and 6 associate professors; among them, 3 experts think that the questionnaire is very suitable, 4 experts think that it is more suitable, 2 experts think that it is average, and no expert deems it inappropriate. According to the results of expert evaluation, it can be seen that the validity of the questionnaire is relatively good and meets the needs of research. The questionnaires are all in Chinese, and the question design is concise and clear; there is no problem of guiding the trend, ensuring the authenticity and objectivity of the survey results. During the investigation period, a total of 200 questionnaires were distributed to the participating masses, 189 were recovered, and 183 were valid questionnaires, with an effective rate of 91.5%. Athlete questionnaires were 20, 19 were returned, 19 were valid questionnaires, and the effective rate was 95%.

4.2. Statistics. Using information from research interviews, according to the research purpose, content, and tasks, the questionnaire data is statistically processed by the particle swarm algorithm to provide reliable data reference for the paper [20, 21].

4.3. Analysis of Results. Through investigation, it was found that in archery, 63.58% of people are accustomed to using gestures and other body movements to transmit

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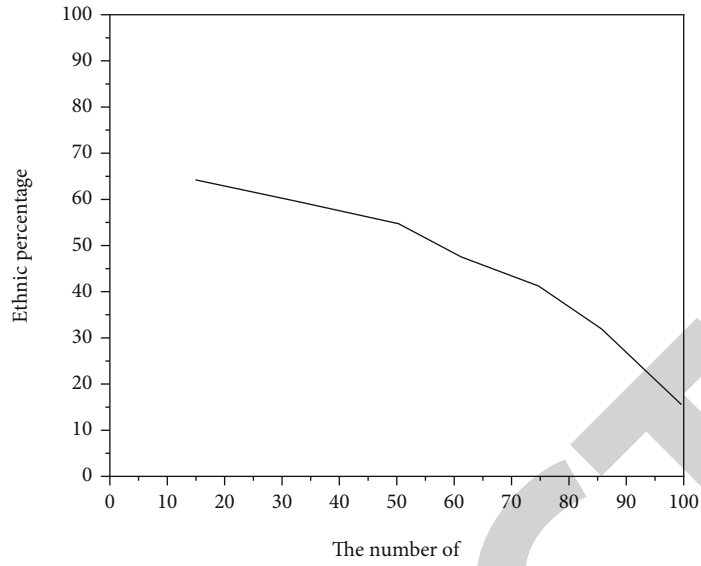

Figure 6: Ethnicity of movement participants.

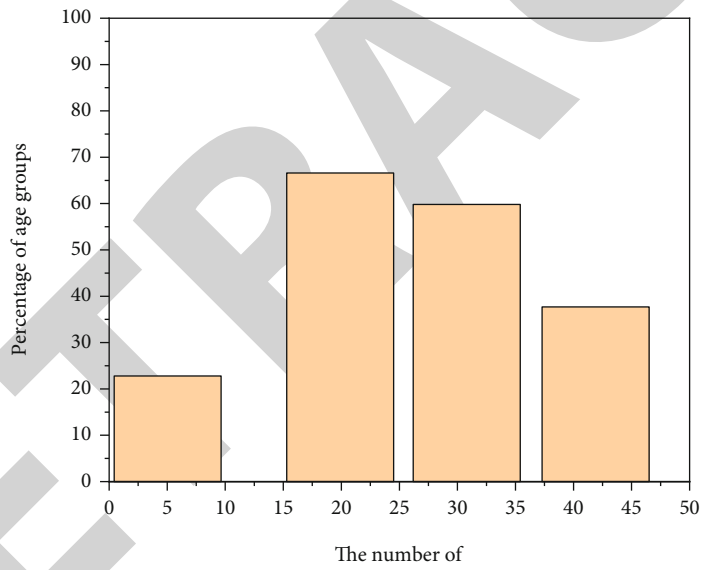

Figure 7: Age levels of sports participants.

information, only 17.02% of people transmit information through language, and only 9.18% transmit information through eyes. This shows that in archery, a relatively quiet environment is required in order to obtain ideal game results, and the field of archery is generally relatively large; gestures can facilitate people's communication when they are far away or inconvenient to speak (Table 1).

During rest, 97.79% of people use language to communicate; this also shows that language plays a leading role in the process of information dissemination. And the number of people who use other methods to transmit information is only a small part. It can be seen that under different circumstances, people will choose different ways of disseminating information according to their own habits (Table 2).

With the spread and development of archery, more and more people from ethnic minorities joined the ranks of archery; through the investigation, we can also see that the participants of the archery sports in Qapqal County are of all races; the participants are mainly between the ages of 20 and 60, but there are also many children and elderly people who will actively participate; the educational level of the participants was also present at all levels (Figures 6–8). Due to various reasons such as language, when encountering archery sports participants from other ethnic groups, they are more inclined to use gestures and expressions to communicate, including greetings and division of venues.

In the process of mass dissemination, the information of the two parties is disseminated in the form of interaction; the

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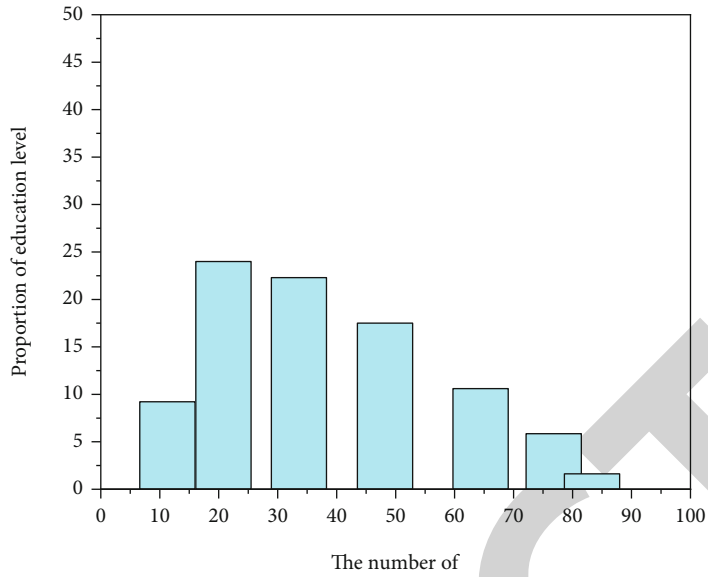

Figure 8: Educational level survey of sports participants.

Table 3: Ways people choose to convey important information in archery activities.

Way of communication	Number of people	Proportion (%)
Face-to-face communication	156	84.69
Use communication tools	22	12.32
Paraphrasing by others	4	1.09
Other way	2	1.54

Table 4: Ways people choose to convey nonimportant information in archery activities.

Way of communication	Number of people	Proportion (%)
Face-to-face communication	79	41.63
Use communication tools	57	30.51
Paraphrasing by others	36	20.21
Other way	11	6.54

Table 5: Ways for participants to communicate face-to-face to obtain information (multiple choice).

Way of communication	Number of people	Proportion (%)
Conversation	154	84.26
Facial expressions and eyes	58	31.21
Voice, intonation	43	20.21
Appearance and clothing	20	10.26
Gesture action	36	20.23
Touch behavior	25	14.25
Other	12	7.01

roles of communicators and recipients are also constantly changing.

When people pass on important information in archery, 84.69% of the respondents will choose face-to-face communication; only a small number of people choose to use communication tools and communicate through others (Table 3). When communicating nonimportant information, people do not focus on the choice of information transmission methods but on their most convenient communication method (Table 4). From this, it can be seen that, in the process of information exchange, people generally choose interpersonal communication with timely feedback, strong interaction, and advantages in persuasion and emotional communication.

In the modern intelligent decentralized communication, a "sports leader" has a great love of sports, is familiar with the development process of sports events, has their own objective and objective views on the cultural value contained in sports, and is a person with unique insights. Sports enthusiasts in family or life circle, professional or amateur athletes and coaches, workers engaged in sports education, community sports instructors, journalists and editors engaged in sports news reporting, etc. [22, 23]. In today's society, although mass media communication is very conspicuous, in a specific period, a specific environment, and the spread of a specific event, the role of intelligent and differentiated communication even exceeds that of mass media communication.

Investigate the ways in which archery participants obtain information when communicating, and it can be seen that when people communicate with each other, 84.26% of the information is communicated through specific conversation content. At the same time, both parties will also synthesize the content of the conversation according to the other party's expressions and eyes, appearance and clothing, gestures, touch behavior, space and distance, and other information (Table 5).

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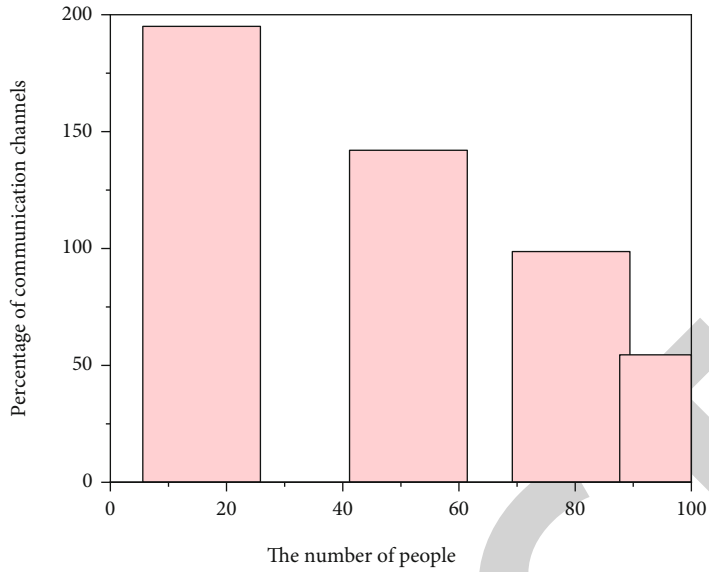

Figure 9: The way of information obtained by archery participants when they use communication tools to communicate (multiple choices).

In short, relying solely on language to communicate and interact has certain limitations on the exchange of information; by combining simple language with body language such as gestures and expressions, it is more attractive and persuasive for the dissemination and communication of sports information.

In the process of intelligent mass dissemination, the most important thing is the dissemination and exchange of information through language. There are two kinds of language: voice language and written language. Voice language is the most basic factor in the process of interpersonal communication; it is also the foundation of self-expression. In the process of language dissemination, it not only conveys the content of the information itself but also complements the content of the information better through nonverbal gestures, expressions, etc. At the same time, the tone, speed, and rhythm of the communicator's speech are also the rendering, supplement, and enrichment of the communication content; it makes interpersonal communication have an emotional color. Language in the process of interpersonal sports communication playing an extremely important role is the core of communication.

In the process of archery and the spread of bow and arrow culture, the method and theory of archery, the technical action requirements in the competition, and the propaganda and display of bow and arrow culture are all closely related to language. As opposed to face-to-face communication, when archery participants use communication tools such as telephone and Internet to communicate, they more rely on language symbols to obtain information. According to the survey, 85.25% of the information is still transmitted through the content of the conversation itself (Figure 9). At the same time, the tone of the two sides of the conversation, the speed of speech, etc. are all supplements to the content of the communication.

As a language symbol, not only does archery enrich people's cultural life but also it infects and attracts people of all ethnic groups to participate in this traditional national sports event; it also enables people to have a better understanding of the people and promotes the cultural exchanges and development of various ethnic groups.

5. Conclusion

The modern values of "archery" culture, such as society, competition, entertainment, and culture, are resources for the development of a nation and can create wealth for the development of a nation, no matter spiritual wealth or economic wealth. "Shooting arts" culture as the traditional culture of China is the excellent tradition of the Chinese nation, is the lifeblood of the Chinese nation culture, and needs a new era to endow them with new modern value, to promote the development of national society and economy, and achieve the traditional excellent culture of the Chinese nation cultural self-confidence, self-improvement, and cultural fusion. The formal and informal channels of intelligent mass communication play an equally important role in the process of archery organization communication. The communication of festivals, competitions, bow and arrow culture, and skills are the main forms of external communication of archery organization. High-quality archery talents and administrators are directly related to the development of archery communication.

Increase the use of modern media; strengthen communication with major TV stations, websites, newspapers, and other media; make reasonable use of the advantages of mass media, archery competitions, and bow and arrow cultural exchange activities held in multiple channels and methods, as well as related attractions of the Bow and Arrow Culture Museum, etc.; carry out multifaceted dissemination, so that the public has more opportunities to contact and understand archery; and realize the unique charm of archery.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Conflicts of Interest

The author states that this article has no conflict of interest.

References

[1] H. Zhao, L. Tian, and D. Wang, "Research on improved firefly optimization algorithm based on cooperative for clustering," *International Journal of Smart Home*, vol. 9, no. 3, pp. 205–214, 2015.

[2] Q. Wu, H. Liu, and X. Yan, "Multi-label classification algorithm research based on swarm intelligence," *Cluster Computing*, vol. 19, no. 4, pp. 2075–2085, 2016.

[3] W. Song, W. Ma, and Y. Qiao, "Particle swarm optimization algorithm with environmental factors for clustering analysis," *Soft Computing*, vol. 21, no. 2, pp. 283–293, 2017.

[4] S. Bouraine, A. Bougouffa, and O. Azouaoui, "Particle swarm optimization for solving a scan-matching problem based on the normal distributions transform," *Evolutionary Intelligence*, vol. 8, pp. 1–12, 2021.

[5] S. Wang and Z. Tang, "Research on the search of external knowledge of enterprise alliance based on ant swarm intelligence theory," *C e Ca*, vol. 42, no. 6, pp. 2696–2700, 2017.

[6] T. Kitamura and T. Hirashima, "Difference in task difficulty level based on task order of structuring task of logic structure and segmentation task," *Transactions of the Japanese Society for Artificial Intelligence*, vol. 34, no. 5, pp. 1–5, 2019.

[7] S. J. Nanda, I. Gulati, R. Chauhan, R. Modi, and U. Dhaked, "A k-means-galactic swarm optimization-based clustering algorithm with Otsu's entropy for brain tumor detection," *Applied Artificial Intelligence*, vol. 33, no. 2, pp. 152–170, 2019.

[8] L. Liu and J. Huo, "Apple image segmentation model based on r component with swarm intelligence optimization algorithm," *International Journal of Performability Engineering*, vol. 14, no. 6, pp. 1149–1160, 2018.

[9] R. Li, W. Zhan, and Z. Hao, "Artificial immune particle swarm optimization algorithm based on clonal selection," *Boletin Tecnico/Technical Bulletin*, vol. 55, no. 1, pp. 158–164, 2017.

[10] Z. Xu, H. Qin, and Y. Hua, "Research on Uyghur-Chinese neural machine translation based on the transformer at multistrategy segmentation granularity," *Mobile Information Systems*, vol. 2021, Article ID 4248, 7 pages, 2021.

[11] P. Dillenbourg, "The evolution of research on digital education," *International Journal of Artificial Intelligence in Education*, vol. 26, no. 2, pp. 544–560, 2016.

[12] S. Liang, X. Huang, and C. Fan, "Double-group particle swarm optimization and its application in remote sensing image segmentation," *Sensors*, vol. 18, no. 5, article 1393, 2018.

[13] T. M. Tuan, T. T. Ngan, and L. H. Son, "A novel semi-supervised fuzzy clustering method based on interactive fuzzy satisficing for dental x-ray image segmentation," *Applied Intelligence*, vol. 45, no. 2, pp. 402–428, 2016.

[14] C. Sun, S. Guo, H. Zhang et al., "Automatic segmentation of liver tumors from multiphase contrast-enhanced CT images based on FCNs," *Artificial Intelligence in Medicine*, vol. 83, pp. 58–66, 2017.

[15] J. Yan, S. Lin, S. B. Kang, and X. Tang, "Change-based image cropping with exclusion and compositional features," *International Journal of Computer Vision*, vol. 114, no. 1, pp. 74–87, 2015.

[16] D. J. Hemanth, A. Aber, and M. M. Al-Rifaie, "Deploying swarm intelligence in medical imaging identifying metastasis, micro-calcifications and brain image segmentation," *IET Systems Biology*, vol. 9, no. 6, pp. 234–244, 2015.

[17] H. Li, X. Su, J. Wang et al., "Image processing strategies based on saliency segmentation for object recognition under simulated prosthetic vision," *Artificial Intelligence in Medicine*, vol. 84, pp. 64–78, 2017.

[18] G. Li, M. Mueller, G. Qian, I. C. D. Perez, and B. Ghanem, "DeepGCNs: making GCNs go as deep as CNNs," *IEEE Transactions on Pattern Analysis and Machine Intelligence, PP*, vol. 99, pp. 1–1, 2021.

[19] V. Djurisic, L. Kascelan, S. Rogic, and B. Melovic, "Bank CRM optimization using predictive classification based on the support vector machine method," *Applied Artificial Intelligence*, vol. 34, no. 12, pp. 941–955, 2020.

[20] S. Mishra, P. Sahu, and M. R. Senapati, "MASCA–PSO based LLRBFNN model and improved fast and robust FCM algorithm for detection and classification of brain tumor from MR image," *Evolutionary Intelligence*, vol. 12, no. 4, pp. 647–663, 2019.

[21] M. Rajalakshmi, V. Saravanan, V. Arunprasad, C. A. T. Romero, O. Khalaf, and C. Karthik, "Machine learning for modeling and control of industrial clarifier process," *Intelligent Automation & Soft Computing*, vol. 32, no. 1, pp. 339–359, 2022.

[22] A. D. Salman, O. I. Khalaf, and G. M. Abdulsahib, "An adaptive intelligent alarm system for wireless sensor network," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 15, no. 1, pp. 142–147, 2019.

[23] R. Surendran, O. I. Khalaf, and C. Andres, "Deep learning based intelligent industrial fault diagnosis model," *CMC-Computers, Materials & Continua*, vol. 70, no. 3, pp. 6323–6338, 2022.

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