

Retraction

Retracted: Research on Marketing Strategy of Chinese Painting and Calligraphy Art Based on Wireless Communication Network Resources

Security and Communication Networks

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret 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 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] T. Zhong, "Research on Marketing Strategy of Chinese Painting and Calligraphy Art Based on Wireless Communication Network Resources," *Security and Communication Networks*, vol. 2022, Article ID 7788645, 9 pages, 2022.

Research Article

Research on Marketing Strategy of Chinese Painting and Calligraphy Art Based on Wireless Communication Network Resources

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China has a thousand years of cultural heritage, and its famous paintings and calligraphy works are all representatives of the works of art. Calligraphy and painting have changed from works of art to commodities. This is undoubtedly caused by the changes of the times and society. Calligraphy and painting have gradually formed in this process. The most basic feature that distinguishes the market from other markets is the difference in marketing strategies. Aiming at the current problems in the online marketing of Chinese paintings and calligraphy works, a marketing strategy for Chinese paintings and calligraphy works based on wireless communication network resources is proposed. In view of the lack of accurate analysis of the current Chinese painting and calligraphy and artwork marketing and the uneven quality of the artwork, the above-mentioned problems can be improved through the allocation of wireless communication network resources. The experimental results show that the scope of dissemination of Chinese paintings and calligraphy works using this marketing strategy is wider, and the marketing transaction rate and profit are greater.

1. Introduction

Calligraphy and painting have become a commodity from their appearance to the present. It is the choice of the times. The calligraphy and painting market formed after painting and calligraphy became a commodity. This market is a market with a strong cultural atmosphere. Without the permission of certain abilities and strengths, it is not qualified to enter the painting and calligraphy market. Since the painting and calligraphy market exists, it must have its own marketing strategy, just like other commodity markets, but its marketing strategy is still based on cultural atmosphere. In the internet age, if the calligraphy and painting market wants to continue to survive and achieve better development, it must keep pace with the times, reflect the advantages of the Internet, do a better job in the calligraphy and painting market, and use the Internet to promote the advantages of calligraphy and calligraphy [1]. The connotation of historical culture allows people to understand

Chinese painting and calligraphy culture and historical civilization. At the same time, it encourages everyone to make self-creation. Do not blindly imitate. Only by creating works with their own style can they have a place in the painting and calligraphy circles. At the same time, the development of appraising programs can also be done. Enhancing everyone's ability to distinguish the authenticity of calligraphy and painting works, this kind of calligraphy and painting market has an artistic soul and can reflect its value not only as a commodity. The establishment of online painting and calligraphy trading venues must be built on many foundations. First of all, the policy is the most basic, so the establishment of online painting and calligraphy trading venues needs a period of precipitation. China's calligraphy and painting market is relatively mature and stable, and value can be reflected in this market [2].

At present, relevant scholars have done research on the marketing strategy of Chinese painting and calligraphy. Literature [3] mainly describes the network business strategy

and business model of painting art from the art network marketing strategy. Now, the sale of calligraphy and painting art is not limited to the sales in the real market. The development of online e-commerce provides new ideas for the marketing of painting and calligraphy art. The possibility of painting and calligraphy art is roughly divided into high- and low-priced art in terms of price. E-commerce websites have a sufficient supply of low-priced art, and consumers of painting and calligraphy art also have a very large potential demand for low-priced art. To make full use of online marketing strategies, find a marketing model suitable for calligraphy and painting art, regulate the prices of low-priced artworks, and improve the visibility and integrity of websites. The online market for calligraphy and painting art will be very huge. Literature [4] proposed an e-commerce product marketing strategy based on the ordinary least squares model. Although there is a negative correlation between e-commerce and corporate performance, it is positively correlated under the intermediary effect of certain types of online sales channels. In particular, when companies use commercial websites and online marketplaces, the benefits of e-commerce in terms of higher sales are more obvious. On the other hand, the interaction between e-commerce and search engines has no significant impact on corporate performance. Literature [5] has experienced that market operators can detect the marginal price of abnormal nodes (LMP) during the real-time (RT) operation of the traditional attack model. Because such an attack model ignores the characteristics of LMP itself, resulting in price increase, abnormal signals can be easily detected. Literature [6], by understanding the specific needs of users and clarifying the design principles of digital museums, uses 3ds Max and virtual reality (VR) software platform Unity3D to develop QAU's museum roaming system of ancient high imitation paintings. The system realizes the dissemination of traditional classical art culture and value through new technical means, which has reference significance for other fields of research.

In the internet environment, every industry sells differently, this article assumes that the impact of e-commerce on business performance is not direct, and intermediary factors need to be used for testing. The ordinary least squares (OLS) model was used with data from the Flash Eurobarometer 439 survey titled "SMEs' use of online markets and search engines." The obtained research results provide support for the mediation hypothesis. More precisely, although there is a negative correlation between e-commerce and corporate performance, it is positively correlated under the intermediary effect of certain types of internet sales channels. In particular, when companies use commercial websites and online marketplaces, the benefits of e-commerce in terms of higher sales are more obvious. On the other hand, the interaction between e-commerce and search engines has no significant impact on corporate performance. This research advances the research on e-commerce by emphasizing the importance of intermediary effects. Online sales methods have brought a lot of benefits to merchants. However, it is impossible for the painting and calligraphy market to change from offline to online because good

paintings and calligraphy are precious Chinese paintings and calligraphy works of art. There are many fake and inferior products that can only be traded offline, but the Internet can be used for publicity. It is one of the ideas of marketing strategy transformation. This article will start from wireless communication network resources to study the transformation of Chinese painting and calligraphy art marketing strategy.

Our contribution is threefold:

- (1) Aiming at the current problems in the online marketing of Chinese paintings and calligraphy works, a marketing strategy for Chinese paintings and calligraphy works based on wireless communication network resources is proposed.
- (2) In view of the lack of accurate analysis of the current marketing of Chinese painting and calligraphy artworks and the uneven quality of artworks, this paper aims to improve the above problems through the allocation of wireless communication network resources.
- (3) The experimental results show that the scope of dissemination of Chinese paintings and calligraphy works using this marketing strategy is wider, and the marketing transaction rate and profit are greater.

The remainder of this paper is organized as follows. Section 1 introduces the marketing status of Chinese painting and calligraphy art. Section 2 discusses the wireless communication network resource allocation method. Section 3 discusses the marketing strategy of Chinese calligraphy and painting based on wireless communication network resources. Section 4 discusses the experiment and analysis. Section 5 presents the conclusions of the study.

2. Marketing Status of Chinese Painting and Calligraphy Art

2.1. Analysis of the Marketing Environment of Chinese Paintings and Calligraphy Works. The main core of the calligraphy and painting market is calligraphy and painting works. Although calligraphy and painting are traded as commodities, their value has never changed. Its historical value will always be there. And everyone pursues it not only because it is a representative of history but also because it is a representative of history. Respected by calligraphy and painting authors, many famous calligraphy and painting masters are sought after by many people in modern times. The most prominent feature of calligraphy and painting is the precipitation of history and culture, which is the embodiment of the social status quo of the time in which the author lives and is the witness of history. In the modern painting and calligraphy auction market, the characteristics of the painting and calligraphy market are a mixture of investment, speculation, collection, consumption, and gifts [7]. As modern Chinese painting and calligraphy, painting and calligraphy are consumer products from which people pursue spiritual enjoyment. In terms of its historical value and artistic connotation, its cultural value is extremely high-

end among modern spiritual consumer goods. It is not only the embodiment of the writer's artistic level but also the embodiment of the modern people's appreciation level. Painting and calligraphy have risen from Chinese painting and calligraphy to consumer goods. It has produced a series of effects, the most obvious of which is the wealth effect. The current calligraphy and painting industry has attracted a lot of investment through the Internet. These investments are undoubtedly for the pursuit of profit. Some paintings and calligraphy works were given to others as gifts and circulated in the gift market [8].

In addition to the modern auction market, there is a gallery market in the calligraphy and painting market. The calligraphy and painting works sold in the gallery can only be sold for the first time. The second sale is very difficult, so some buyers who need decoration will buy it. This part of the group has no investment intentions, just consumer groups. Painting and calligraphy work as Chinese painting and calligraphy works of art; their price is not fixed, unlike ordinary commodities; and it has a fixed selling price. The price of painting and calligraphy works is for the buyer, who likes to attach importance to a painting and calligraphy work. It can be purchased at a high price. If the same work is given to another person who does not need it or appreciate it, the convincing work will have no value in its eyes, and there will be no price at all.

The off-season and peak season of the calligraphy and painting market are mainly determined by the festival. When the Mid-Autumn Festival and the Spring Festival are approaching, the peak season of the calligraphy and painting market will appear. During this time, there are many holidays, and many people have time to visit friends and relatives. It will be accompanied by gifts. Painting and calligraphy are two of the alternative gifts. At the same time, many house decorations are also placed in free time such as holidays. Therefore, painting and calligraphy will also be popular as decorations during holidays. The premise of buying and selling in the calligraphy and painting market is that people with knowledge and culture are needed to identify the true and false. Therefore, many appraisers have appeared, and now, there are many appraisal programs and appraisal companies. These are all economic effects brought by the calligraphy and painting market. In fact, Chinese paintings and calligraphy works do not have much effect on the national economy and people's livelihood. The reason why it can become a "famous person" in the eyes of the public is mainly because of the media's attention after its economic effects are discovered. The media reports after the auction of the paintings and calligraphy works. It will arouse everyone's attention so that the calligraphy and painting works will appear to have more economic value in everyone's eyes.

2.1.1. Macro Environment. Economic and political environment: art as spiritual food is derived from people's material foundation to meet certain requirements. Only in the environment of social harmony, economic stability, and civilization development can people's ideas progress and the

market for calligraphy and painting art develop. These two factors are also important reasons that affect the prosperity or decline of the Chinese painting and calligraphy art market.

Social and cultural environment: society is an all-encompassing overall environment. To flourish the Chinese painting and calligraphy art market, first of all, the society must have a relaxed and free atmosphere, which can provide creators with an environment for creating art, and it must be inclusive and open.

Attitude: if the social environment is a narrowly restricted environmental space, the Chinese painting and calligraphy art market can only go to extinction. If the social restrictions are too narrow, then the Chinese calligraphy and painting artworks created by the artists do not have their own style characteristics and cannot express their artistic creations according to their own ideas.

Legal environment: from an artistic point of view, Chinese paintings and calligraphy works do not seem to be closely related to the law. One is a symbol of freedom, and the other is a representative of rigor. But when Chinese painting and calligraphy works as a commodity, the law is inevitably linked with it. When Chinese painting and calligraphy works are closely linked with the law, we need a complete and reasonable system to restrict and protect the Chinese painting and calligraphy art market.

2.1.2. Microenvironment. Creative producer: as a person who creates and produces Chinese painting and calligraphy works of art, he must first have high-quality aesthetics and mature creative skills. As the creator of Chinese painting and calligraphy, creators must have keen observation and insight. First of all, we should discover our own essence and use skilled techniques to create a piece of Chinese painting and calligraphy and then choose the appropriate marketing channels to turn Chinese paintings and calligraphy into a commodity.

Exhibition: the exhibition is equivalent to an intermediary in the marketing process of Chinese painting and calligraphy art. It has a fixed venue for planning and then exhibiting Chinese painting and calligraphy art. In this type of environment, most of the exhibitions are mostly Chinese calligraphy and painting artworks created by new and young artists. At present, all kinds of exhibitions are emerging in cities, and they are scattered in every corner of the city.

Auction house: as a professional organization for marketing Chinese paintings and calligraphy works, auction mainly provides venues and related workers. The Chinese paintings and calligraphy works on display will be auctioned publicly, and the higher bidder will get the money.

2.2. Problems in the Marketing of Chinese Calligraphy and Painting Art.

- (1) Lack of accurate analysis: In the marketing of Chinese paintings and calligraphy, people often cannot accurately analyze the environment. When marketing Chinese calligraphy and painting works of art,

it is only treated as a commodity, without distinguishing the differences between different Chinese calligraphy and painting works of art. For example, sculpture and painting have different styles, and their marketing methods and strategies are often very different.

- (2) The quality of Chinese paintings and calligraphy works is uneven: When Chinese paintings and calligraphy works are marketed as a commodity, their fame and style will be paid attention to. Generally, when we look at a piece of Chinese painting and calligraphy, we also pay attention to its creativity. But creation does not mean to be unconventional, but it cannot be imitated all the time. The current Chinese painting and calligraphy art market often follows the trend. If the Chinese painting and calligraphy art is well marketed, there will be hundreds of such things appearing, and the hype becomes popular, and the counterfeit products are rampant.

3. Wireless Communication Network Resource Allocation Method

3.1. Priority Setting. In the internet era, the marketing strategies of commodities have undergone earth-shaking changes. It is one of the common ways to change from offline to online [9]. The access of wireless communication network resources is through the division of different time slots on the dedicated wireless network. So that different types of wireless communication services can select different time slots according to the set priority, then share a frequency band on the corresponding time slot, and use the time slot to isolate the wireless communication network resources on the physical layer in the multiservice air interface [10]. The initial access flow chart of wireless communication network resources is shown in Figure 1:

The specific implementation process of its access is to set the priority of different services according to the transmission requirements of different services when multiple service terminals send access and transmission applications [11]. The formula for priority setting is as follows:

$$k = \arg \max \frac{T_k}{S_k} (k \notin \emptyset_1). \quad (1)$$

Here, k represents the priority of the service, T_k represents the access delay threshold of wireless communication network resources, and S_k represents the amount of resources to be accessed. Then, the idle time slot is allocated according to the priority from the channel resources, and the time slot occupation table is generated [12]. The table is sent to each service terminal, and the terminal analyzes the time slot in which the respective transmission service is located and performs access and transmission of wireless communication network resources on the corresponding frequency band. When there are many applications for network resource services, low-priority services will access fewer but relatively fixed time slot resources, and a larger number of resources will be reserved for higher-priority services [13].

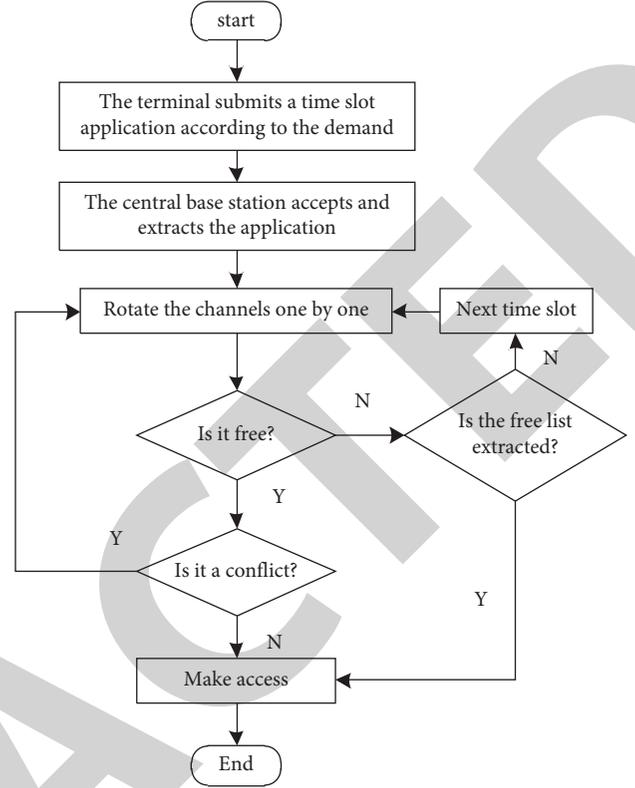


FIGURE 1: Flow chart of wireless communication network resource access.

3.2. Forwarding of Wireless Communication Network Resources. After the central base station accesses the wireless communication network resources, when the network resource node is far from the assigned service node, the smooth distribution of wireless communication network resources is realized by adding relay nodes. The main task of the relay node is to complete the wireless communication network [14]. The forwarding of resources in order to forward the network resources. In order to ensure the smooth completion of the wireless communication network resource forwarding, the decoding forwarding method is adopted. At the network service end, each source sending end sends out its own resource information in the form of broadcast, and the network resource destination receiving end and the relay node listen to and receive this signal at the same time. The calculation formula of the resource energy value received by the relay node is as follows:

$$E^r = \tau_0 \cdot P_s \cdot |h^{br}|^2 \cdot a \cdot b \cdot k. \quad (2)$$

Here, E^r is the received resource energy value, τ_0 is the energy receiving time, P_s is the resource signal sent from the central base station, h^{br} is the signal transmission time, a is the energy receiving efficiency of the relay node, and b is the received energy The percentage of resources that can be used to forward information. Next, the relay node decodes and evaluates the received signal after receiving the signal. Then the relay node forwards the estimated network resource signal to the resource receiving destination. The information

of the two channels is judged and received separately through the resource receiving destination. In this forwarding process, the relay node performs simple detection and judgment processing on the received network resource signal, which does not have high requirements on the wireless communication system, and facilitates subsequent wireless communication network resource allocation.

3.3. Allocation of Wireless Communication Network Resources. The allocation of wireless communication network resources is mainly based on the network resources that are accessed from the central base station and forwarded through the relay node. The proportional fairness algorithm is used for allocation. Under the premise of ensuring a certain wireless communication network capacity, the fairness of resource allocation is fully considered. Maximizing the logarithm sum of the average distribution rate of each service user in the wireless communication network is called proportional fair distribution scheduling P , which is specifically expressed as follows:

$$P_k(t) = \frac{E^r \cdot r_k(t)}{R_k(t-1)} \quad (3)$$

Here, $P_k(t)$ is the allocation rate of network resources, $r_k(t)$ is the instantaneous allocation rate of service k at time t , and $R_k(t-1)$ is the allocation rate of service k before time t . The specific steps of the algorithm are as follows: the first step is to equally allocate the allocated power of the wireless communication network resources; the second step is to substitute the service user k into formula (3) to calculate the corresponding network resource allocation rate. The third step is to compare the network resource allocation rates of different services, and the one with the highest allocation rate is substituted into the algorithm set for cumulative calculation.

Therefore, in the process of wireless communication network resource allocation, under the premise of ensuring a certain network resource capacity, the fairness of different services can be taken into consideration, and the allocation of wireless communication network resources can be realized.

4. Marketing Strategy of Chinese Calligraphy and Painting Based on Wireless Communication Network Resources

In the internet age, the calligraphy and painting market can also follow its development and open up an online trading market. The online market is convenient and fast, can facilitate the transaction, and save a lot of steps. It is chosen by many commodity exchanges, but it has many in the calligraphy and painting trading market [15]. The most important thing is that the authenticity of the works cannot be guaranteed. Therefore, if the online painting and calligraphy trading market wants to exist, it must ensure the authenticity of the works and not deceive consumers. This requires the strong support of the national government to proceed. It needs strict state supervision to continue to exist. The

purchaser must also make a sincere purchase. It cannot be a secret exchange. After completing an online transaction, return the goods for reasons other than the goods. This increases the risk of the authenticity of the goods. It is also quite unfair to the sellers in the painting and calligraphy market transactions. Therefore, if you create an online trading venue, national supervision is not only to supervise the seller but also to supervise the buyer. Transactions are what you want and you can trade when the two parties agree, but the transaction must comply with the national legal system. Therefore, it is necessary to open up online painting and calligraphy market transactions, and supervision is the control point of every transaction [16].

Through the allocation and utilization of wireless communication network resources, the basic characteristics of painting, calligraphy, and art are analyzed, and possible problems existing in the establishment and operation of the current network marketing system are discussed. Manufacturers and open e-commerce platforms belong to the same supply chain. If, in this supply chain, the manufacturer chooses to establish its own exclusive network platform for sales, then the manufacturer will have the leadership and power to decide how to determine the wholesale price of the product and how much. This situation conforms to the Stackelberg game model. In this model, the market for manufactured products is shared by professional e-commerce platforms and manufacturers. But the manufacturer will dominate. The model is shown in Figure 2.

In Figure 2, X_1 represents the wholesale price at which the manufacturer wholesales the product to the open e-commerce platform. P_1 represents the price at which the open e-commerce platform sells products to consumers. P_2 represents the price at which the manufacturer directly sells the product to the consumer. Determine and analyze the game sequence according to the model. First, the final purpose of the manufacturer's establishment of its own network platform for sales is also for the benefit and to maximize profits. In this case, in order to maximize profits, two variables need to be determined. One is the price at which the manufacturer wholesales the product to the open e-commerce platform, that is, what X_1 is, and the other is the manufacturer's own establishment. What is the price of the product sold through online channels? That is, what is P_1 ? Second, for open e-commerce platforms, profits must also be maximized. Therefore, the open e-commerce platform also needs to determine two variables: one is the wholesale price given by the manufacturer, which is X_1 . The second is the price you sell to consumers, which is P_1 .

If the manufacturer establishes its own network platform for sales, it also needs to bear the operating expenses, assuming that the cost is F . The manufacturing cost of the product is expressed as CM . Other fixed costs are ignored. The profit of the manufacturer can be expressed as: $(X_1 - CM)Q_1 + (P_2 - CM)Q_2 - F$. Knowing the various variables, the profit of the manufacturer can be calculated. For a professional e-commerce platform, the profit is expressed as: $(P_2 - X_1)Q_1$. Once the manufacturer determines two variables, one is the price X_1 at which the manufacturer wholesales the product to the open e-commerce platform, and

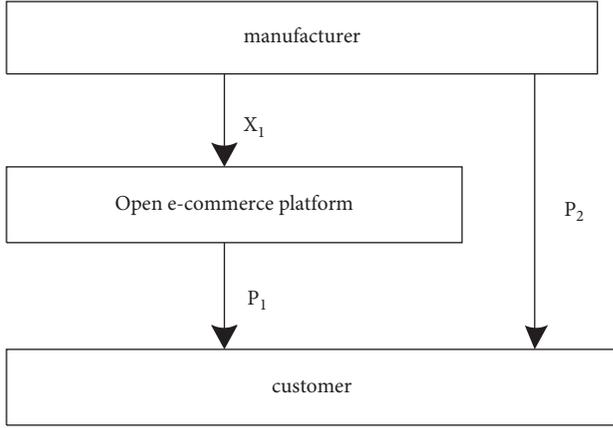


FIGURE 2: Open e-commerce platform model of Chinese painting, calligraphy, and art.

the other is the price P_1 at which the manufacturer sells the product through the network channel established by the manufacturer. The optimal response function of the open e-commerce platform can be obtained as follows:

$$P_1(P_2, X_1) = \frac{(1-a)D + aX_1 + bP_2}{2a}. \quad (4)$$

Finally, the profit expression function for the manufacturer and the Hessian matrix related to the two variables can be obtained, expressed as follows:

$$\begin{bmatrix} \frac{2b^2 - 4a^2}{2a} & a \\ b & -a \end{bmatrix}. \quad (5)$$

If $a > b$, for the manufacturer, both the profit expression and the Hesse matrix are negative definite. Therefore, when $a > b$, the optimal sales price P_2 and the optimal wholesale price X_1 that maximize the profit can be obtained according to the characteristics of the quadratic concave function. The best selling price is expressed as follows:

$$\frac{b(1-a) + aD}{2(a^2 - b^2)} + \frac{CM}{2}. \quad (6)$$

The optimal wholesale price can be expressed as follows:

$$\frac{b(1-a) + bD}{2(a^2 - b^2)} + \frac{CM}{2}. \quad (7)$$

The best wholesale price and the best selling price are expressed as above. For the manufacturer, the optimal demand Q_2 can also be obtained, which is expressed as follows:

$$\frac{(2a-b)}{4a} + \frac{(ab + b^2 - 2a^2)CM}{4a}. \quad (8)$$

According to the above optimal wholesale price X_1 , optimal demand Q_2 , and optimal sales price P_2 , the manufacturer's maximum profit can be obtained.

The above analysis systematically analyzes the basic characteristics of calligraphy and painting and discusses the possible problems existing in the establishment and operation of the current network marketing system. Starting from the problem, effective planning can be formed in the following three aspects to form an effective online marketing system for calligraphy and painting.

First of all, a marketing environment with multiple channels needs to be established. It is necessary to use modern technology to build the environment of marketing channels. In fact, there are two main environmental factors that plague internet marketing at this stage: one is the need to solve the problem of customer trust; the other is the problem of commodity circulation. The solution of the first environmental problem depends on the development of technology, such as VR technology, real-time video technology, remote internet of things technology, and so on, through the integration of related technologies to solve the effectiveness of customers in appraising and appreciating works, so as to improve credibility. The second problem requires effective cooperation with third-party logistics companies to form a dedicated logistics channel for calligraphy, painting, and art. On the other hand, due to the relatively high added value of artworks, a self-operated professional logistics system can also be constructed in an attempt [17].

Secondly, do a good job in the diversion of art marketing platforms. Targeted and effective publicity should be aimed at the people who adapt to the calligraphy and painting works. Make full use of big data information to identify target groups and form a marketing propaganda network on the basis of identification. It is possible to comprehensively use the foundation of offline platforms and the method of letting third parties to expand the scope and effect of publicity. Pay attention to the characteristics of calligraphy and painting works themselves in the drainage and form a variety of ways of the display, such as online explanations by artists, public classrooms, public auctions, and so on, so as to achieve a better marketing system and strategy construction.

Finally, establish an effective marketing path. With the necessary technical support, it is necessary to change the existing single network channel to form a combined online and offline marketing path. Specifically, use the construction foundation of the offline system to form an effective customer group and brand support, thereby increasing the credibility of the network marketing system. In the process of network marketing platform and path construction, it is necessary to follow the basic model from the shallower to the deeper, that is, to market general paintings and calligraphy works and to conduct large-scale artwork transactions after having a certain flow basis and brand effect. Through this step-by-step approach, the success of the integrated network marketing system is achieved.

On this basis, a promotion strategy for the international market of Chinese traditional painting artworks is proposed, as shown below.

4.1. International Sales Promotion. International marketing personnel engaged in calligraphy, calligraphy and art should have professional experience in international marketing of calligraphy and art and be familiar with the consumer psychology of target customers and background knowledge of calligraphy and art. Different salespersons are responsible for different painting and calligraphy themes and match salespersons according to the needs of target customers. International marketers are professional and are a source of profit in the international market. Due to the development of e-mail and mobile media, the personnel sales model has become more convenient.

4.2. International Event Promotion and Public Relations. To organize international promotion activities for calligraphy, calligraphy and art, it is necessary to cooperate with overseas hotels, attractions, travel agencies, and other institutions to hold experiential calligraphy and art appreciation, free calligraphy and calligraphy art training, Chinese traditional culture lectures, and other forms of cultural elegance. Set activities. Cultural enterprises can invite local customers, calligraphy and calligraphy artists, and artists to create on-site calligraphy and calligraphy. Participants can experience the fun of calligraphy and painting and feel the charm of calligraphy and calligraphy or design interactive games, where participants can get famous on-site calligraphy and painting. This can not only carry out customer relationship management but also send out potential customers and at the same time improve the company's social visibility and reputation.

4.3. International Advertising Promotion. In international advertising and promotion, media means should be selected according to the expected effect of the advertising, the financial strength of the company, and the characteristics of target customers. The content of advertising should not conflict with local laws and culture. In view of this, cultural companies can outsource advertising to advertising companies in the target market. Because they are familiar with the local social and cultural environment and are highly recognized by local consumers, they can receive better market coverage and penetration. Or choose a domestic local advertising company to use its branches in foreign target markets to display advertising and promotional activities.

5. Experimental Research

In order to analyze the effectiveness of the Chinese calligraphy and painting art marketing strategy based on wireless communication network resources, a comparative experiment is designed. Literature [3] and [4] are used as experimental comparison methods to verify the effectiveness of the designed strategy from the three aspects of the spread of Chinese paintings and calligraphy, the marketing transaction rate, and the profit.

5.1. Experimental Environment and Parameters. The experiment was carried out in MATLAB simulation software,

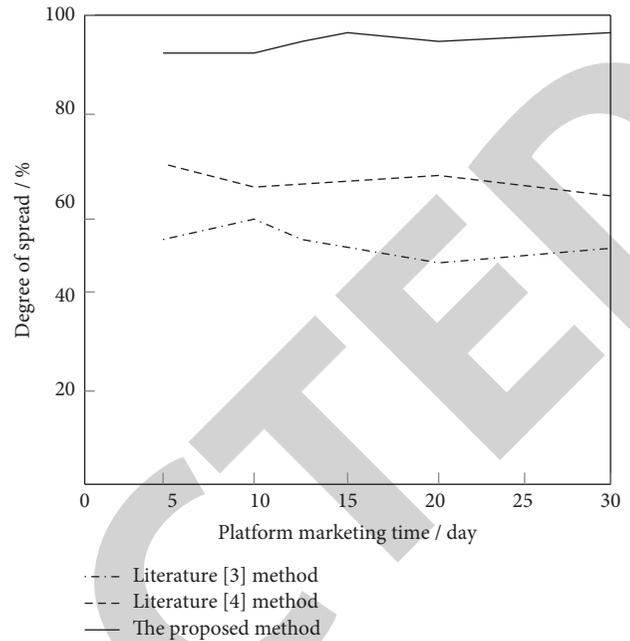


FIGURE 3: Comparison of the spread of Chinese paintings and calligraphy works.

and literature [3] and [4] were used as experimental comparison methods to simulate the marketing process of Chinese paintings and calligraphy works and to draw conclusions on marketing effects.

5.2. Analysis of Experimental Results. Compare the spread of the three methods for Chinese calligraphy and painting, and the comparison results are shown in Figure 3.

Analyzing Figure 3, it can be seen that when traditional methods are used to spread Chinese calligraphy and art, the initial level of communication is acceptable, but as the number of platform marketing days increases, the degree of communication has a downward trend, indicating that traditional methods cannot meet the requirements of Chinese calligraphy and art communication. The method in this paper has a relatively high degree of communication during dissemination, and the dissemination ability gradually increases with the increase of time, indicating that the use of wireless sensor network resources to determine target needs has increased the spread of Chinese paintings and artworks and deepened people's understanding of Chinese paintings and calligraphy.

On this basis, the three methods are tested for the marketing transaction rate of Chinese paintings and calligraphy works, and the comparison results are shown in Figure 4.

Analyzing Figure 4, it can be seen that the average marketing transaction rate of the method in literature [4] is 40%, the average marketing transaction rate of the method in literature [7] is 30%, and the average marketing transaction rate of the method in this paper is 69%. With the increase of marketing time, the marketing transaction rate is also higher. Because the method in this paper increases the

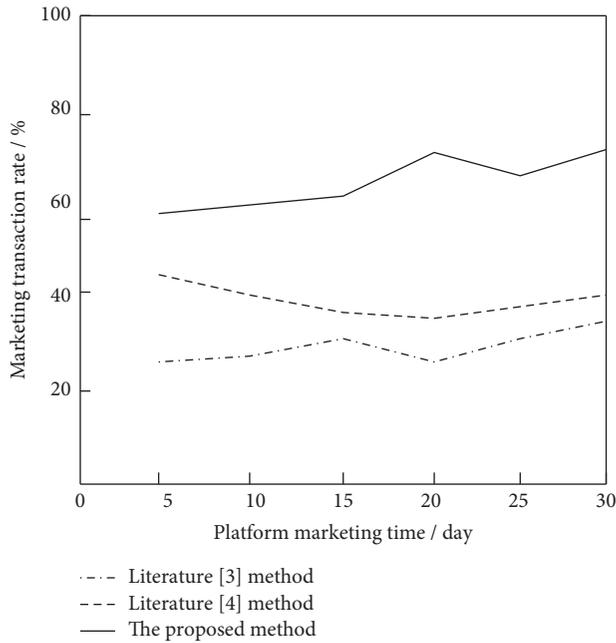


FIGURE 4: Marketing transaction rate of Chinese paintings and calligraphy works.

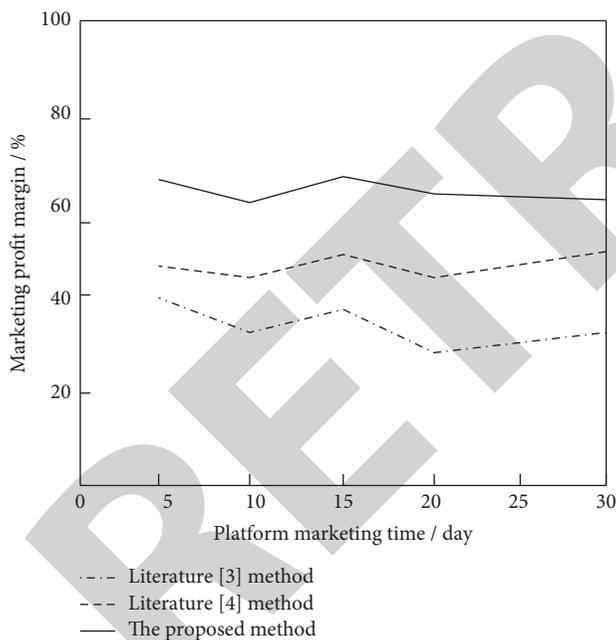


FIGURE 5: Marketing profit of Chinese calligraphy and painting art.

spread of Chinese calligraphy and artworks and classifies Chinese calligraphy and artworks through wireless sensor network resources, it can help target users accurately find their favorite Chinese calligraphy and artworks and increase the marketing transaction rate.

On this basis, the three methods are tested for the marketing profit of Chinese paintings and calligraphy works, and the comparison results are shown in Figure 5.

Analyzing Figure 5, it can be seen that the average profit rate of the method in literature [4] is 46%, the average profit

rate of the method in literature [7] is 38%, and the average profit rate of the method in this paper is 66%. The art dissemination of the method in this paper is wider; the art marketing transaction rate is higher; and the marketing profit is higher, which can effectively promote the marketing of contemporary calligraphy and painting.

6. Conclusion

In the internet age, if the calligraphy and painting market wants to continue to survive and achieve better development, it must keep pace with the times, reflect the advantages of the Internet, and do a better job in the calligraphy and calligraphy market. The connotation of history and culture allows people to understand Chinese painting and calligraphy culture and historical civilization. At the same time, they encourage everyone to make self-creation. Do not blindly imitate. Only by creating works with their own style can they have a place in the painting and calligraphy circles. At the same time, the development of appraisal programs can also be done. Enhancing everyone's ability to distinguish the authenticity of calligraphy and painting works, this kind of calligraphy and painting market has an artistic soul and can reflect its value not only as a commodity. The establishment of online painting and calligraphy trading venues must be built on many foundations. First of all, the policy is the most basic. Therefore, the establishment of online painting and calligraphy trading venues requires a period of precipitation. This article uses wireless communication network resources to study the marketing strategy of Chinese paintings and calligraphy works and accurately locates Chinese paintings and calligraphy works through the allocation of wireless communication network resources, classifies the quality of the works, and realizes precision marketing. The experimental results show that after switching to this strategy, the spread of Chinese paintings and calligraphy works will be wider, and the marketing transaction rate and profit will be greater, which can provide certain help to the marketing of Chinese paintings and calligraphy works.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The author declares that there are no conflicts of interest.

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