

Protection and Development of Arts and Crafts from the Perspective of Environment and Public Health

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Abstract: China is the only country in the world with a world cultural heritage. China's long-standing civilization, long-standing farming civilization and the diverse ecological environment of 56 ethnic groups make China very rich in ethnic folk culture and artistic resources. Folk art is an ancient civilization with a long history. It is the mother of Chinese culture and an important carrier of human history. However, with the economic globalization, the accelerated development of urbanization, the rapid changes in scientific and technological innovation, and the great changes in the economy, society, and cultural living environment, people's values, knowledge structures and entertainment interests have undergone tremendous changes. Traditional arts and crafts have also suffered a great impact in the market economy and social and cultural changes, and some special arts with local characteristics are facing extinction. This paper used OBJ (object) technology to realize the encapsulation and description of three-dimensional entities, materials, positions, angles and other information, and comprehensively explained and analyzed the arts and crafts. In a survey on the popularity of handicrafts, it was found that pricing was a big factor in tourists' willingness to spend. 71% of tourists could accept handmade products less than 100 yuan. Therefore, in general, cheap price, good quality, and local characteristics were the most important factors.

1. Introduction

Chinese traditional folk culture is a broad and profound cultural "living fossil", which carries the ingenuity and creativity of the Chinese nation. Chinese traditional crafts have a long history, rich varieties and superb craftsmanship. It not only has a long historical and cultural background, but

also has a distinct regional character, which is the basis for building and supporting the city. In the period of natural economy, agricultural production is dominant, and abundant natural resources are the material basis for the prosperity of handicrafts. However, due to the excessive utilization of resources, the shortage of resources has led to the "priceless" situation of traditional arts and crafts works. Green, low-carbon, ecological production methods and alternative raw materials that can be mass-produced and reused can meet the needs of the general public. The lifestyles of contemporary society are constantly changing, and traditional craftsmanship is required to carry out corresponding design changes. The changes in the human ecological environment on which traditional crafts depend and the limitations of craftsmanship also require changes in their existing methods and material craftsmanship to achieve sustainable development.

The protection and development of arts and crafts is a hot research topic in modern times. Among them: Yuxuan W proposed an advanced approach for the protection and inheritance of traditional arts and crafts in the era of big data. As the material carrier of culture, traditional arts and crafts were an important part of Chinese traditional culture [1]. Wang Z analyzed and introduced the development and characteristics of Chinese traditional arts and crafts. He made an in-depth analysis of how to apply traditional arts and crafts to modern exhibition design, and proposed the significance of applying traditional arts and crafts to exhibition design [2]. Li J focused on the creative industry of arts and crafts intangible cultural heritage, and conducted in-depth research on its spatial agglomeration characteristics [3]. Gudowska B believed that although arts and crafts belonged to a narrow field within the cultural and creative industries group, they could contribute to the achievement of the goals of the United Nations and had a positive impact on employment, fair trade and ethical production [4]. Liu G aimed to explore how to apply three-dimensional (3D) digital technology to traditional arts and crafts. By comparing traditional ceramic and glazed design methods with 3D digital design methods, the advantages and advancement of 3D digital technology were highlighted [5]. However, these studies were only in the theoretical stage and had little practicality due to the lack of a deep understanding of arts and crafts or the unclear data sources.

It is very innovative to study the protection and development of arts and crafts from the perspective of environment and public health. Rogers E B proposed that the Indiana University Mathers Museum of World Culture purchased a collection of works from the Cherokee Indian Eastern Band's Qualla Arts and Crafts Mutual in 1973, which was one of the oldest Native American-owned arts and crafts cooperatives in the United States[6]. Boichenko M aimed to identify the origin and development of the idea of Ukrainian and Western European classical educators applying elements of folk craftsmanship in teaching and upbringing [7]. Rico L G aimed to link basic human needs satisfaction with increasing levels of self-reliance in terms of art, industry and the dissemination of situational knowledge [8]. Sohail A proposed that in Pakistan, academic study of art and screenwriting skills was practically taken for granted. This overlook was one of the reasons why Pakistani cinema could not get along with its contemporaries [9]. Nortvig A M presented a learning design experiment in art disciplines integrating art museums into physical spaces through the use of virtual reality. The learning design experiment in craft and design integrated hands-on studios into physical spaces through the use of simultaneous online webinars [10]. However, due to the traditional thinking and definition, the above research cannot be highly integrated and give play to their advantages.

The innovations of this paper are as follows: (1) Open Graphics Library (OpenGL) technology is used to construct the handicraft display model, and its application prospects are discussed in depth. (2) OBJ's 3D modeling and texture mapping technology are combined, and from the perspective of artistic expression, the protection of traditional handicrafts and the integration of 3D information technology is beneficially explored.

2. Evaluation of Arts and Crafts Display Platform Based on 3D Model

2.1. Representation, Organization and Storage Methods of Multimedia Information of Folk Art

With the rapid development of multimedia technology, new multimedia technologies emerge one after another. Video, audio, and images have become the basis of modern information systems, which can not only fully reflect the characteristics of entities, but also enrich their expressions. Figure 1 shows the structure of the multimedia information database of folk handicrafts:

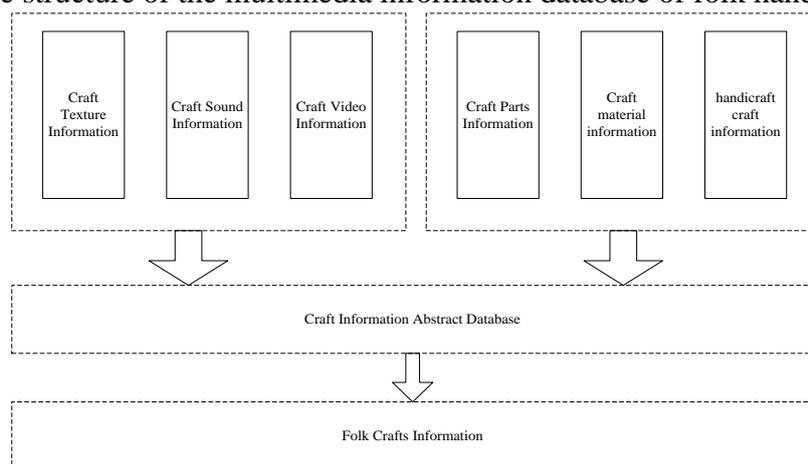


Figure 1. Multimedia information database structure

As can be seen from Figure 1, the research on multimedia information retrieval of folk handicrafts should first start with the history, production technology, and color rules of arts and crafts, and analyze them. The representation of multimedia includes low-level visual features, middle-level image features and upper-level semantic features [11-12]. Based on this, the organic integration of multimedia information is realized, and the problems of data structure and expansibility are solved. By using the visual characteristics of the bottom layer, the visualization of the image is combined with the abstract expression of the upper layer, so as to realize the application of graphics.

2.2. Engine Technology for OBJ 3D Model

At present, virtual reality technology and interactive Web3D technology mainly include virtual reality modeling language (VRML) technology, DIRECT3D technology and OpenGL technology. Since VRML officially became a universal standard in the world in December 1997, VRML has been widely used in the Internet, and its use range has even exceeded BASIC, JAVASCRIPT and so on. Language and characters can be written into 3D animations, 3D games, and 3D computer-assisted teaching. Its biggest advantage is that it can be embedded in web pages, which is an interactive virtual reality model language based on Internet. VRML can not only represent static and dynamic three-dimensional multimedia objects, but also access media, such as text, sound, images, movies, etc., through the objects it represents. It is also easy to observe from various angles [13]. However, this simple language is not strong. The connection of high-level languages such as JAVA is difficult, and it cannot well meet the needs of users. In addition, due to the interpretive feature, the rendering speed is relatively slow, so it is difficult to realize real-time roaming of large-scale and complex virtual scenes on general computer platforms. The above shortcomings greatly restrict its use. Figure 2 shows the workflow of OpenGL:

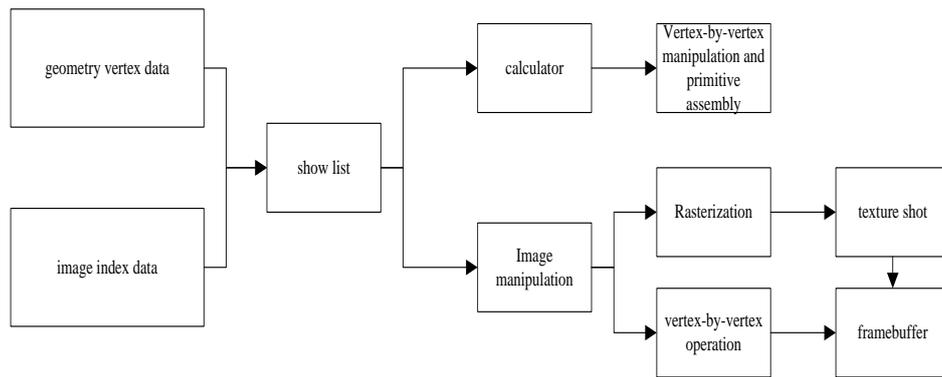


Figure 2. OpenGL workflow

It can be seen from Figure 2 that OpenGL is open and highly reusable, and can be used in Windows, MacOS, OS/2, Unix/xwindows and other environments. It is only slightly different in the place related to windows, so its portability is very strong, and the calling method is simple. It has been well received by users and has been widely used. Table 1 shows the performance comparison of three different models with their respective features and advantages and disadvantages.

Table 1. Comparison of the three techniques

Serial number	Technology	Implementation level	Best suited for application areas
1	Opengl	Bottom layer (graphics card)	3d design software
2	Direct3d	Bottom layer (operating system)	3d game
3	Vrml	Upper layer (web page)	Virtual reality online

As shown in Table 1, according to the product structure, texture characteristics, manufacturing process flow and innovative design of the process, a multi-layer 3D object description document based on product structure and material characteristics is constructed, and a product model library and material library are established; the processing of texture includes the statistics of structure areas such as area, shape, color distribution, and regional variance. In addition, this paper also conducts in-depth research on structured texture mapping algorithms to make textures more natural and realistic when structures are combined. Based on the above comparison, this paper uses OpenGL as the basic technology.

2.3. 3D Model Data Acquisition and Visualization Module

(1) 3D model data acquisition

The main function of this module is to extract the data of the 3D model from the model file, such as triangular pieces and materials. In the OBJ document visualization system, the OBJ document interpretation program is used to realize the interpretation of the OBJ document. This category contains two methods, and these methods are provided externally. The first one uses GlmFirstPass to initialize the model, and then initializes the item points, normal vectors, texture coordinates, and triangles in the model [14-15]. This interface provides a basic transformation method for 3D modeling data visualization. Among these algorithms, the most important is to generate a display list of 3D models. The behavior diagram of this method is shown in Figure 3.

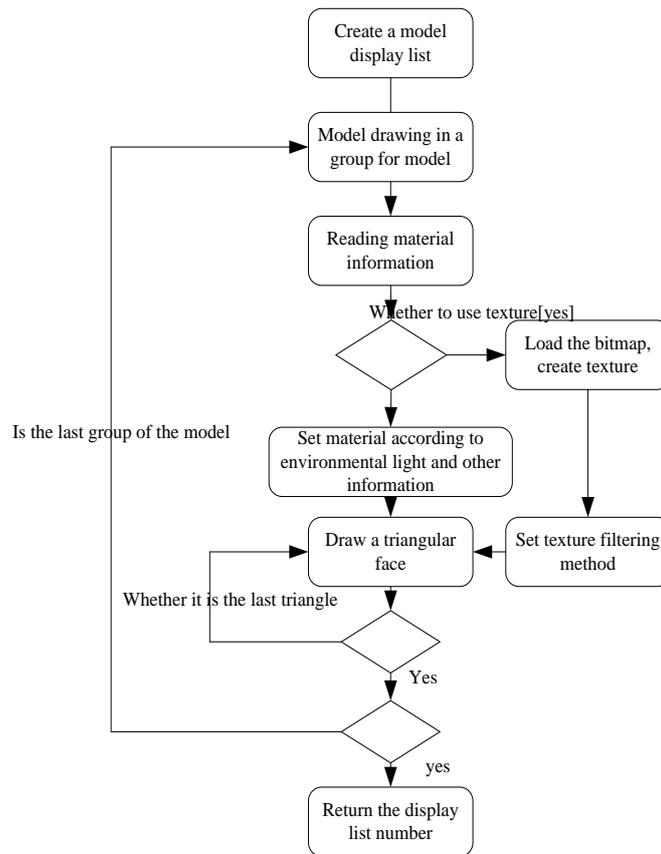


Figure 3. 3D model display list generation description

As shown in Figure 3, after the display list of the model is generated, the model must be placed in an appropriate three-dimensional space and scaled properly before the display list is invoked to display the model. In OpenGL, view transformation, mode transformation, view transformation and other methods can be used to achieve: OpenGL does rotation transformations via `GLRotate`. Among them, the parameter angle represents the rotation angle, and x, y, and z represent the direction vector of the rotation axis; `GLScale` is used for scaling conversion, and these three parameters represent the scaling coefficients of x, y, and z [16]. The viewport is the rectangular window area measured in window coordinates, which determines the size of the screen. The parameters x, y here represent the size specified by the lower left corner of the view, width and height. After completing these settings, the display list of the OBJ model can well realize the visualization of the OBJ model.

As mentioned above, according to the characteristics of handicrafts, such as: cloisonne round bottle, purple clay pot, bamboo tube, etc. At the same time, three methods are used to improve the effect of texture mapping: The problem of discontinuous boundaries during the mapping process is eliminated and the user is allowed to do multiple local texture mappings. At the same time, bump texture mapping is used. To achieve these goals, it is necessary to define relevant data structures that facilitate mapping.

(2) Texture boundary-processing of discontinuous boundaries

The OBJ document uses the triangular surface approximation method to represent the three-dimensional entity, and the OpenGL function library includes the generation of the triangular surface, which provides a simple method for the generation of the 3D entity. In the process of local mapping, discontinuous texture coordinates must be generated at the edge, as shown in Figure 4. When a triangular surface crosses the edge of the texture, it is no longer a continuous coordinate and must be handled specially:

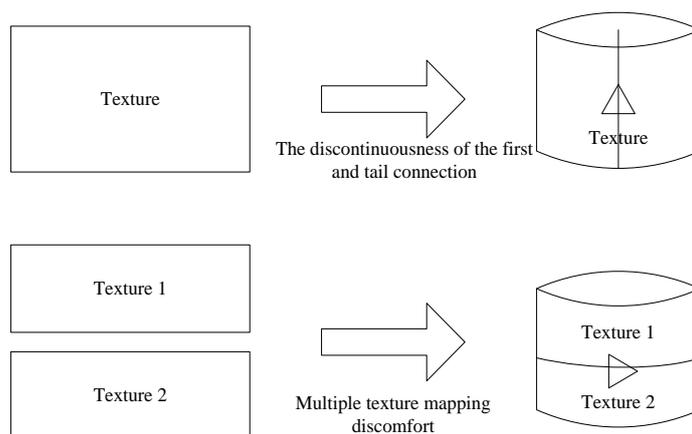


Figure 4. Discontinuities at the boundaries

As can be seen from Figure 4, the processing in this paper is:

1) Discontinuity of end-to-end connections

First, this paper expands the texture space, and the same texture image is expanded around the texture, so that it has continuous edges; secondly, in the spatial mapping, the end-to-end mapping space points are first determined. That is to say, when the triangular surface is not in the boundary area, the selected texture coordinates are the traditional texture coordinates; in this boundary area, this paper uses the extended texture coordinates of this area to map the triangle [17-18]. This requires this paper to specify a domain parameter angle.

2) Discontinuity for local multiple texture mappings

This paper temporarily avoids its continuity problem: In the local area of multiple textures, this paper defines an area that is not allowed to map. Good mapping can also be achieved if the size of the isolation region is properly controlled. In this paper, the area parameter height [19] needs to be specified for the isolation area.

2.4. Display Process of 3D Graphics

The computer itself can only process digital, and graphics is the digital processing and processing inside the computer. As shown in this paper, coordinates connect graphics with numbers. To digitize a displayed object, a coordinate system must be determined in the space in which the object is located. The length of the system and the orientation of the axes should be adapted to the displayed object, that is, the so-called global coordinate system. After the computer processes the digital display object and displays it on the computer screen, it is necessary to establish a two-dimensional rectangular coordinate system called the screen coordinate system on the computer screen. Generally, the axis of the coordinate system is parallel to the edge of the screen, and the coordinate origin at the lower left is located at the lower left. The unit of length is generally one pixel, and the size can be an entire sheet.

Sometimes, in order to make a part of the picture brighter, only a certain area can be displayed, and a stereoscopic viewing angle can be determined at this time. Orthographic projection is usually a rectangular view, while in stereo projection it is a prism-like view [20]. Only the innermost objects can be projected onto the display, and not the rest. A viewport can be defined as a rectangle called a viewport. Figure 5 outlines the display process of the 3D image.

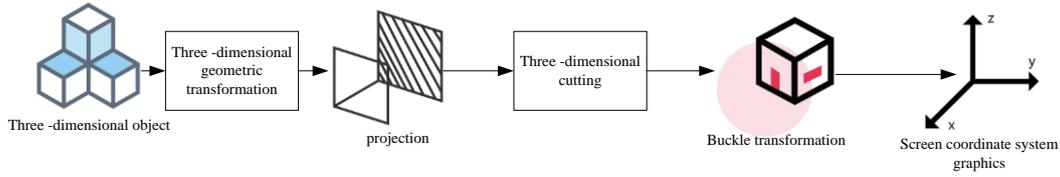


Figure 5. Display flow of 3D graphics

2.5. Evaluation of 3D Modeling Algorithm under Arts and Crafts

Aiming at the three-dimensional modeling of arts and crafts products, this paper proposes a hybrid mesh form with triangles and quadrilaterals as basic units. Let v , e , t be a vertex, an edge, and a patch. Among them, the rules are as follows:

If v is a vertex of t , v is associated with t . The set of all related surfaces of vertex v is denoted by $D(v)$; let u be another vertex on M . If both u and v are two vertices of an edge, they are said to be connected. All associated vertices of vertex v are $B(v)$, which is represented by the following method. Through this correlation, the connection status of M mesh nodes can be obtained. It is assumed that S is another block on grid M . If both s and t have an edge in common, it is called a connection between them. Through this connection, this paper can derive a planar patch connection diagram of M . In a mesh model, the index of its vertices and the index of the mesh face can be obtained, the formulas are as follows:

Mesh vertex index:

$$V = \{v_1, v_2, \dots, v_n\} \quad (1)$$

Among them, n is the number of model mesh vertices. Therefore, the mesh patch indices are:

$$F = \begin{Bmatrix} F_1 \\ F_2 \\ \dots \\ F_m \end{Bmatrix} = \begin{Bmatrix} f_{11} & f_{12} & f_{13} & f_{14} \\ f_{21} & f_{22} & f_{23} & f_{24} \\ \dots & \dots & \dots & \dots \\ f_{m1} & f_{m2} & f_{m3} & f_{m4} \end{Bmatrix} \quad (2)$$

Based on vertex index and mesh index, topological information such as model edge index, vertex-vertex index, and geometric information such as bounding box, patch center coordinates, patch normal vector, and vertex normal vector are obtained:

Edge index:

$$D_x = \{e_1, e_2, \dots, e_l\} \quad (3)$$

Vertex-patch indices:

$$D_{wf} = \{B(v_1), B(v_2), \dots, B(v_n)\} \quad (4)$$

$$L_{wf} = \{L(v_1), L(v_2), \dots, L(v_n)\} \quad (5)$$

Among them, D_{wf} is the index linked list from vertex to patch; L_{wf} is the query auxiliary vector of D_{wf} , and then the associated patch index of the vertex is:

$$B(v_i) = \{f_1, f_2, \dots, f_k\} \quad (6)$$

The auxiliary vector queried by vertex v_i in D_{wf} is:

$$L(v_i) = [S^{v_i}, C^{v_i}] \quad (7)$$

The auxiliary vector is queried in D_{wf} , and S^{v_i} and C^{v_i} are the starting index and index number of the D_{wf} query in v_i , respectively.

Vertex-vertex index:

$$D_{wv} = \{D_v(v_1), D_v(v_2), \dots, D_v(v_n)\} \quad (8)$$

$$L_{wv} = \{L_v(v_1), L_v(v_2), \dots, L_v(v_n)\} \quad (9)$$

The vertex-vertex index D_{wv} is similar to the vertex-patch index; $D_v(v_i)$ is the index value of the vertex adjacent to v_i in V ; L_{wv} is the query aid vector of D_{wv} .

Patch 3D AABB bounding box, normal vector and center coordinates:

For a piece of mesh F_i , it consists of 4 vertex indices $f_{i1} \sim f_{i4}$, which surround box $(x_{\min}, y_{\min}, z_{\min}, x_{\max}, y_{\max}, z_{\max})$. By comparing $v_{f1}, v_{f2}, v_{f3}, v_{f4}$, its coordinate value can be obtained. At this point, the plane of this mesh is a triangle, and its normal vector is:

$$\mathbf{n}_i = (v_{f1} - v_{f2}) \times (v_{f1} - v_{f3}) \quad (10)$$

Otherwise, the mesh is quadrilateral and its normal vector is:

$$\mathbf{n}_i = (v_{f1} - v_{f3}) \times (v_{f2} - v_{f4}) \quad (11)$$

Grid center point coordinates:

$$cen_i = \left(\frac{x_{\min} + x_{\max}}{2}, \frac{y_{\min} + y_{\max}}{2}, \frac{z_{\min} + z_{\max}}{2} \right) \quad (12)$$

The normal at mesh vertex v_i is v_i the average of the normals of all associated patches. After querying $L(v_i)$ in L_{wv} and querying $B(v_i)$ in D_{wv} , the formula is as follows:

$$\mathbf{n}_i^v = \frac{1}{C^{v_i}} \sum_{j=1}^{C^{v_i}} \mathbf{n}_{S^{v_i}+j}^{B(v_i)} \quad (13)$$

In this paper, a deformation method based on free deformation is proposed and the gradient deformation formula is established by using the principles of physical mechanics. The space curve is used to control the deformation range, so that the deformation of the deformation region is distributed in a gradient. This reduces the solution range of the deformation problem to the mesh to be deformed locally, thereby reducing the amount of deformation calculation. On the premise of ensuring the deformation effect, the degenerated triangular meshes are detected to ensure that the number of meshes remains unchanged.

Collision detection can be translated into collisions of individual boxes in individual 3D images. When the corresponding boxes intersect, the collision of the triangles is used to determine whether there is a collision. The formula is as follows:

$$\left\{ \begin{array}{l} \text{centroid} = \frac{A+B+C}{3.0} \\ \text{min point} = (\min(A.x, B.x, C.x), \min(A.y, B.y, C.y), \min(A.z, B.z, C.z)) \\ \text{min point} = (\max(A.x, B.x, C.x), \max(A.y, B.y, C.y), \max(A.z, B.z, C.z)) \end{array} \right. \quad (14)$$

The Oriented Bounding Box (OBB) tree is established by octree to achieve accurate collision detection, and the octree oriented bounding box structure is constructed using the triangular facets of the target human body model.

Among them, the bounding box intersection judgment method is briefly described as when the conditions are met:

$$\max \text{Point}_A.x < \min \text{Point}_B.x \quad \text{or} \quad \min \text{Point}_A.x < \max \text{Point}_B.x \quad (15)$$

Among them, the two bounding boxes do not intersect, otherwise the two intersect.

The following paper would start with Laplacian smoothing, followed by weighted Laplacian smoothing, and then Laplacian smoothing based on a single-image interactive clothing model. Here is curvature-based smoothing.

$$\delta_i = (\delta_i^{(x)}, \delta_i^{(y)}, \delta_i^{(z)}) = V_i - \sum_{j \in N(i)} \omega_{i,j} V_j \quad (16)$$

However, conventional Laplace spectrometers have the problem of shrinking three-dimensional models and poor accuracy. Therefore, the calculation formula of Laplace coordinates must be modified.

$Weigh_{ij}$ is used to represent the weight measurement of vertex V relative to vertex V_i when it is used as an adjacency, and the calculation formula is:

$$Weigh_{ij} = \frac{1}{|V_i - V_j|} \quad (17)$$

Let the formula be:

$$\omega_{ij} = weigh_{ij} / \sum_{k \in N(i)} weigh_{ik} \quad (18)$$

After substituting into Formula (14), the obtained Laplace coordinates are adjusted smoothly. In order to control the smoothing rate, parameters are introduced, and the formula is as follows:

$$V_i = (1-\lambda)V_i + \lambda(V_i - \delta_i) \quad (19)$$

This method is used for interaction models based on a single image.

In the curvature smoothing adjustment, the adjustment direction is taken into account when recalculating the weight. The normal direction of the vertices is usually chosen, and the weights are chosen appropriately in Laplace smoothing. The formula is as follows:

$$weigh_{ij} = \frac{\cot \alpha_{ij} + \cot \beta_{ij}}{2} \quad (20)$$

3. Investigation and Evaluation of Craft Aesthetics in the Context of Environment and Public Health

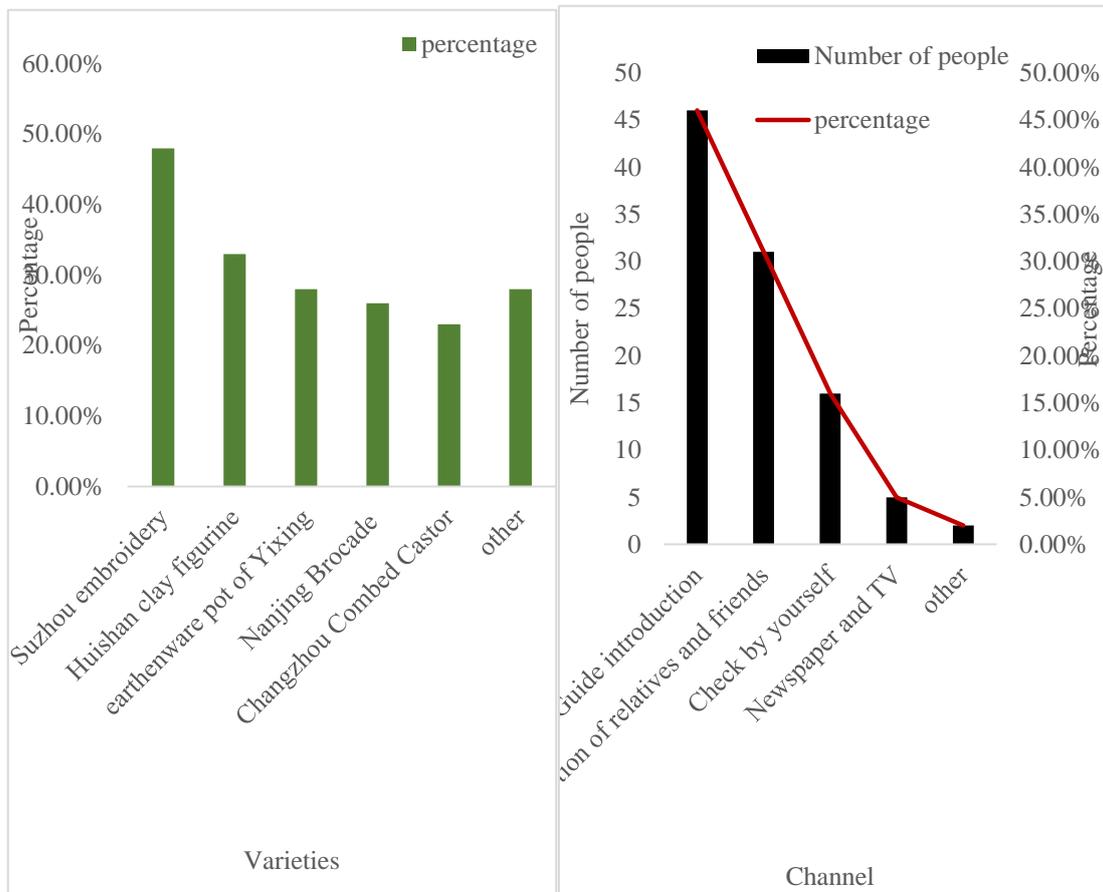
3.1. Overview of the Traditional Arts and Crafts Market in a Certain Region

Based on 3D modeling technology and according to the research needs, the "Market Survey Questionnaire on the Consumption of Handicrafts in Wuxi Area" was compiled. This questionnaire aims to understand the public's understanding of traditional arts and crafts, and explore the influence consumers have on it, as shown in table 2:

Table 2. Basic information of respondents

	Category	Number of people	Percentage
Gender	Male	40	40.00%
	Female	60	60.00%
Age	Under 20	3	3.00%
	21-30 years old	25	25.00%
	31-40 years old	29	29.00%
	41-50 years old	40	40.00%
	Over 51	3	3.00%
Education level	Under junior college	25	25.00%
	Specialty	34	34.00%
	Undergraduate	37	37.00%
	Master or above	4	4.00%
Occupation	Civil servant	5	5.00%
	Clerk	48	48.00%
	Science and education personnel	14	14.00%
	Worker	9	9.00%
	Student	7	7.00%
	Farmer	0	0.00%
	Retiree	2	2.00%
	Liberal professions	15	15.00%
Monthly income	Less than 2000 yuan	15	15.00%
	2001-4000	40	40.00%
	4001-6000	34	34.00%
	6001-8000	5	5.00%
	More than 8000 yuan	6	6.00%

As can be seen from Table 2, in April 2013, Wuxi Overseas Travel Company provides 120 questionnaires to tourists from Wuxi, with a total of 100 valid questionnaires. The survey respondents include 40 males and 60 females. Among them, 69% of tourists are 31-50 years old, and most of them have bachelor degree or above. Clerks account for 48% of the total number of employees. The composition of personnel in other industries is basically the same, and 74% of them have a monthly salary of 2001-6000 yuan. After the questionnaire, the data is collected, and some are multiple choice. The respondents' understanding of traditional arts and crafts is shown in Figure 6:

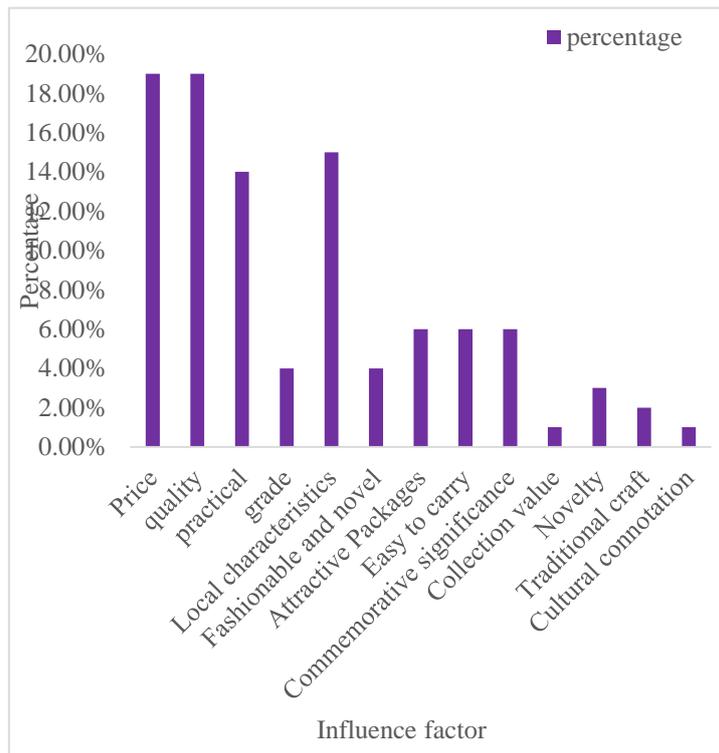


(a). Respondents' perception of traditional arts and crafts

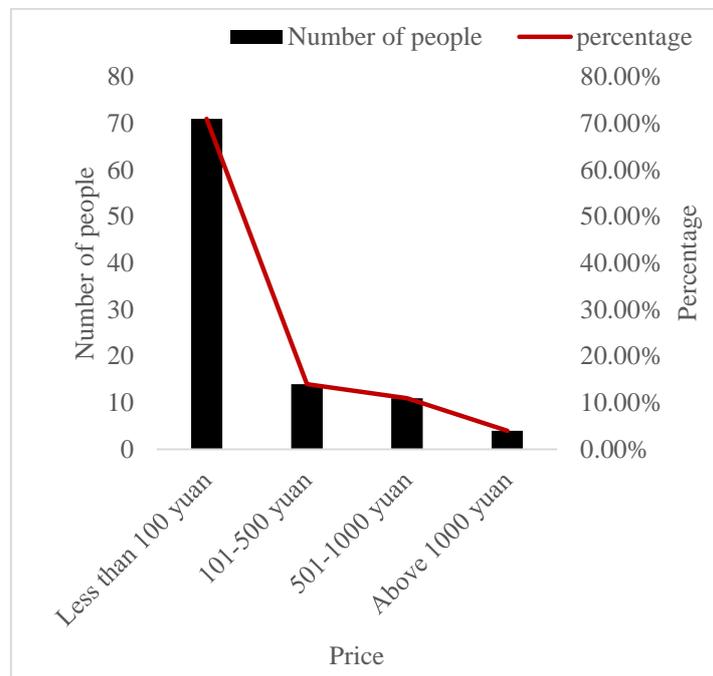
(b). Respondents' cognitive channels on traditional arts and crafts

Figure 6. Statistical graph of respondents' perception of traditional arts and crafts

Among the 17 items of Jiangsu traditional handicrafts, Su embroidery, Huishan clay figurines, Yixing purple clay pot, Nanjing Yunjin, and Changzhou comb are shown in Figure 6(a). Wuxi's traditional handicrafts occupy two seats, which shows that Wuxi's traditional crafts are still well-known among tourists. However, this also reflects that other traditional techniques in Wuxi are not well known in the market and have insufficient brand influence. In Figure 6 (b), 77% of the people recognize this traditional handicraft under the recommendation of tour guides and relatives and friends, which shows that modern people's understanding of traditional handicraft is a passive knowledge rather than active collection. The factors that influence tourists' purchase of handmade goods are shown in Figure 7:



A. Influencing factors of tourists buying handicrafts

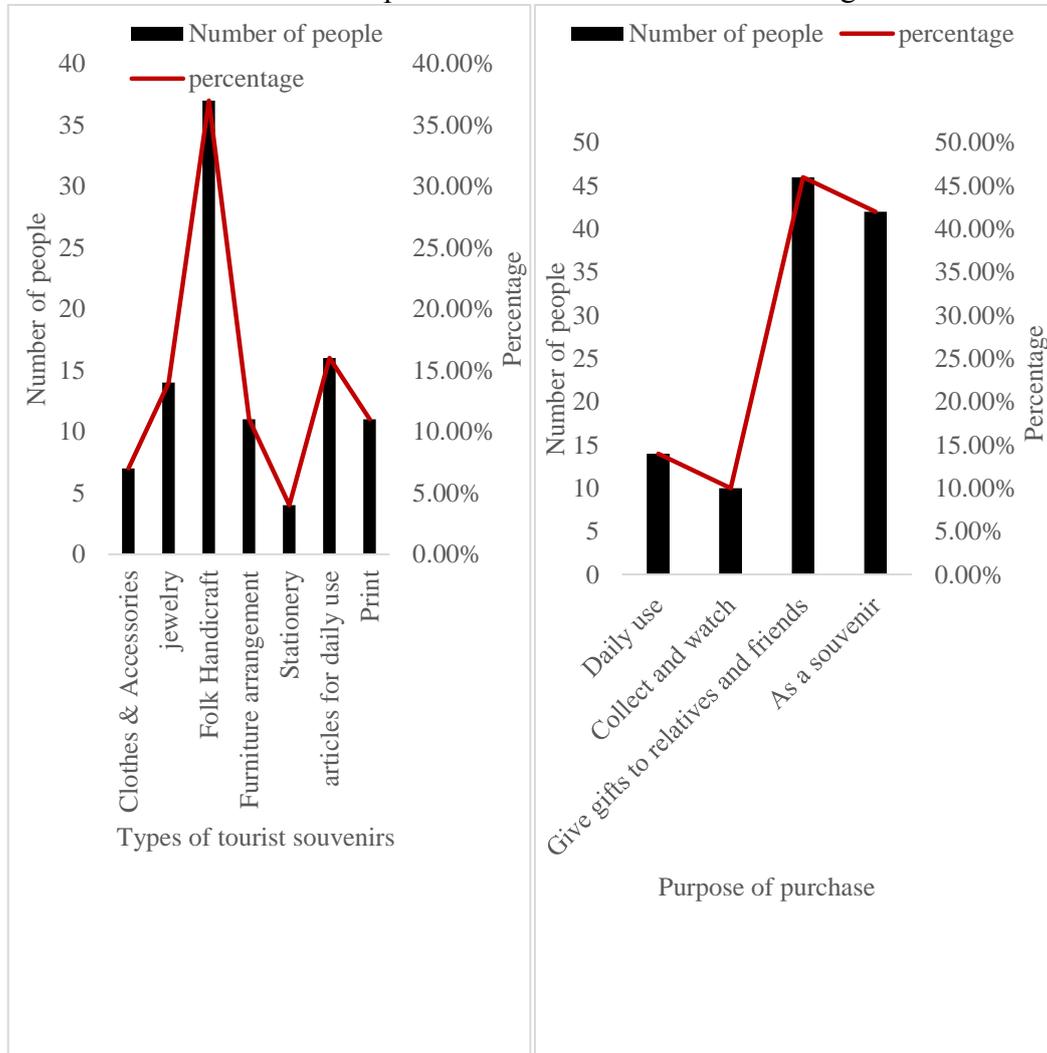


B. Prices of handicrafts acceptable to tourists

Figure 7. Statistical chart of tourists' acceptance of handicrafts

As shown in Figure 7A, when consumers buy handicrafts, among the influencing factors, price = quality > local characteristics > practical > commemorative > packaging > creative novelty > easy to carry > traditional crafts > grade > fashionable and novel > cultural connotation > collection

value. Therefore, in the consumption choice of tourists, pricing is a big factor. As shown in Figure 7B, 71% of tourists can accept the price of handmade products below 100 yuan. Therefore, in general, cheap price, good quality, and local characteristics are the most important factors. Respondents' favorite handicrafts and purchase intentions are shown in Figure 8:



(a). Types of arts and crafts that respondents like (b). Respondent's purchase purpose

Figure 8. Statistical graph of respondents' attitudes towards handicrafts

As shown in Figure 8(a), the most popular form of handmade products for tourists are ethnic handicrafts with characteristics of origin. From this point, it can be seen that as a kind of handicraft, folk handicraft already has a certain market foundation. In Figure 8(b), the respondents buy handicrafts first to give to relatives and friends and second to keep them as souvenirs for themselves.

3.2. Summary of the Market Survey of Arts and Crafts

Through this investigation, this paper finds that Huishan clay figurines and Yixing purple clay pots, two traditional Wuxi handicrafts, still enjoy a high reputation in Wuxi and are the most frequented by tourists. It can be seen from this point that other traditional arts and crafts markets in

Wuxi are not well-known, and there are not many varieties of emerging modern arts and crafts in Wuxi. The acceptance of traditional culture in modern society is negative. Therefore, in order to truly become a handicraft and occupy a place in the market, Wuxi's traditional crafts need to be properly advertised to increase its market visibility and influence. Tourists buy handicrafts mainly to give to relatives and friends and secondly to leave souvenirs for themselves. However, the survey found that nearly half of the tourists did not buy handicrafts in Wuxi. They believe that Wuxi's handicrafts are generally overpriced and lack creativity with local characteristics and moderate packaging design. Low value refers to the lack of effective market competitiveness; the variety is single, the shape is outdated. There is a lack of creative design with local characteristics, which makes it difficult for contemporary consumers to generate interest in purchasing; the packaging is rough and cannot reflect a certain grade, which is a loss of the consumer market. These are some of the problems faced by the Wuxi handicraft market, and it is also a problem that Wuxi traditional crafts need to solve when designing and transforming.

4. Conclusion

The development of arts and crafts takes traditional culture as the core value. It takes target appeal and design elements as the core, and organically integrates traditional craftsmanship with modern cultural and creative industries. This paper was about the inheritance and protection of traditional crafts. This was to re-display and re-design traditional crafts in the context of the vigorous development of the tourism industry, and finally returned to the daily life of the people to achieve the purpose of inheritance in the development. Through the analysis of contemporary art, it could be seen that: Firstly, commercialization was the way of survival of contemporary art; secondly, the design transition from traditional handicrafts to modern arts and crafts should reflect the cultural connotation of inheritance and retain its national cultural characteristics; thirdly, the modernization of traditional arts and crafts must be passed on through the guidance of the way of life and be inherited in the development. In view of the limitation of time and research, this paper discussed the issue of "creativity-oriented to express the impact of traditional crafts on modern lifestyles", which was not exhaustive and only had a few rough views. However, this is a foothold for the survival and development of Chinese traditional arts and crafts in the contemporary era, and it is worth exploring in future studies.

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Data Availability

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

Conflict of Interest

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

References

- [1] Yuxuan W. *An advanced approach for protection and inheritance of traditional arts and crafts in the era of big data. Boletin Tecnico/Technical Bulletin. (2017) 55(19): 164-170.*

- [2] Wang Z. *Analysis on Application of Traditional Arts and Crafts in Exhibition Design*. *Open Journal of Social Sciences*. (2017) 5(4): 85-89. <https://doi.org/10.4236/jss.2017.54008>
- [3] Li J, Wei L. *Study on the characteristics of space agglomeration in the creative industries of arts and crafts intangible cultural heritage*. *Revista de la Facultad de Ingenieria*. (2017) 32(13): 348-352.
- [4] Gudowska B. *Arts and Crafts and UN Sustainable Development Goals*. *International Journal of New Economics and Social Sciences*. (2020) 11(2020 no 1): 277-288. <https://doi.org/10.5604/01.3001.0014.3547>
- [5] Liu G. *Research on the application of 3D digital technology in traditional arts and crafts design*. *Paper Asia*. (2019) 2(1): 180-185.
- [6] Rogers E B. *Exhibiting Moments: Qualla Arts and Crafts Mutual at the Mathers Museum of World Cultures*. *Museum Anthropology Review*. (2019) 13(1): 32-46. <https://doi.org/10.14434/mar.v13i1.26472>
- [7] Boichenko M, Nykyforov A, Hulei O. *Genesis of the Idea of Using Folk Arts and Crafts Elements in Teaching and Upbringing in Classical Ukrainian and Western European Pedagogical Thought*. *Journal of History Culture and Art Research*. (2020) 9(2): 123-123. <https://doi.org/10.7596/taksad.v9i2.2579>
- [8] Rico L G, Vallejos I I. *Human Scale education from local arts, crafts and knowledge in So Gonalo Beira Rio Sao (Brazil) and the Trawun program (Chile)*. *Polis (Santiago)*. (2020) 19(56): 81-107.
- [9] Sohail A, Ullah F. *The Art and Craft of Screenwriting: Practice and Prospects of Screenwriting in Pakistani Film*. *Journal of Peace Development & Communication*. (2021) volume 05(issue 2): 230-240. <https://doi.org/10.36968/JPDC-V05-I02-21>
- [10] Nortvig A M, Petersen A K, Helsinghof H, Brnder B. *Digital expansions of physical learning spaces in practice-based subjects - blended learning in Art and Craft & Design in teacher education*. *Computers & Education*. (2020) 159(4): 104020-104020. <https://doi.org/10.1016/j.compedu.2020.104020>
- [11] Kneebone R, Schlegel C, Spivey A. *Science in hand: how art and craft can boost reproducibility*. *Nature*. (2018) 564(7735): 188-189. <https://doi.org/10.1038/d41586-018-07676-4>
- [12] Glyantsev S P. *Art, craft and science of limb amputation Part 1. Art and craft of amputation: from Hippocrates to Ambroise Pare (V century B.C. - XVI century). Wounds and wound infections the prof B M Kostyuchenok journal*. (2020) 7(1): 6-25. <https://doi.org/10.25199/2408-9613-2020-7-1-6-25>
- [13] Mccannon D. *Pattern and pedagogy in print: Art and Craft Education in the mid twentieth-century classroom*. *Journal of Illustration*. (2019) 6(2): 241-263. https://doi.org/10.1386/jill_00013_1
- [14] Mokhtar M. *Art and Craft in the Era of Creative Industry in Malaysia*. *Ars Jurnal Seni Rupa dan Desain*. (2018) 21(2): 157-168. <https://doi.org/10.24821/ars.v21i2.2885>
- [15] Kim, DeokJu. *The effects of a combined physical activity, recreation, and art and craft program on ADL, cognition, and depression in the elderly*. *Journal of Physical Therapy Science*. (2017) 29(4): 744-747. <https://doi.org/10.1589/jpts.29.744>
- [16] Attygalle D. *The Art, the Craft and the Mart - of Medicine*. *Sri Lankan Journal of Anaesthesiology*. (2017) 26(1): 74-75. <https://doi.org/10.4038/slja.v26i1.8306>
- [17] Jamouchi S. *Exploring Art and Craft in Teacher Education Whilst Going Toward a Performative Approach*. *SFU Educational Review*. (2019) 12(1): 68-81. <https://doi.org/10.21810/sfuer.v12i1.612>

- [18] Zeitels S M. *The Art and Craft of Phonomicrosurgery in Grammy Award-Winning Elite Performers. Annals of Otology Rhinology & Laryngology.* (2019) 128(3_suppl): 7S-24S. <https://doi.org/10.1177/0003489418810697>
- [19] Inocian R B, Cuestas J P, Keith J, Carin L, Canoy E. *Unveiling the indigenous art and craft of bakat and its economic significations. Journal of Cultural Heritage Management and Sustainable Development.* (2019) 9(4): 445-467.
- [20] Durante D. Peter Ginna, ed. *What Editors Do: The Art, Craft, and Business of Book Editing. Journal of Scholarly Publishing.* (2019) 50(2): 148-152. <https://doi.org/10.3138/jsp.50.2.07>