A Study of Digital Archive and Digital Learning for the Taiwanese Dough Figure Art

Ruilin Lin
Dept. of Commercial Design
Chienkuo Technology University
Changhua, Taiwan
e-mail: linrl@ctu.edu.tw

Received July 2010; accepted October 2010

ABSTRACT. The purpose of this study to collect data from local industries related to the traditional Taiwanese dough figure art and to conduct interviews with professionals. Using Wu Dough Figure Art Centre as an example, this study planned to build a digital archive website with instant and convenient internet technologies and construct a digital learning platform with creative design concepts, in order to preserve the beauty of art in the local cultures in Taiwan, and to reach the goals of the holistic education of art and creativity derived from the local cultures.

Keywords: Dough figure art; Digital archive; Digital learning; Cultural creative industry

1. Introduction. The digital programs in the “Challenge 2008: National Development Plan” include a six million home broadband users program, a IPv6 development program, a secured information communication environment program, a national digital learning program, a national digital archive program, a digital entertainment program, and an internet cultural construction development program. Digital learning and digital archive have become important methods to preserve and disseminate knowledge in the world. They are also required in order to pass on local cultures and to create new industries [3]. The term “dian-cang” (archive) did not exist in traditional Chinese. “Dian” means to carefully preserve important documents and “cang” means the preservation for all things. The meanings of these two characters are similar. However, “dian” is limited to books and documentation. “dian-cang” is the equivalent of “shou-cang” (collection) but different from the general concept of collection. Moreover, the core professions and values of creativity, marketing, and digital archive are not exactly incompatible. On the contrary, they complement each other. Collections are made for different purposes such as preservation, exhibition, education, and research [7]. This study had built a digital archive website through creative technologies, based on the preservation and conservation of the traditional Taiwanese dough figure art and local cultural industries, with the attempt to carry out the goals of holistic education of art and the inheritance of humane art through the communication via the digital learning platform.

2. Literature Review. The national digital archives program in Taiwan began in January, 2002. Although a lot of problems have been solved in the process, the voices of value-added applications have created more pressure. Digital archive is no longer an issue
of preserving precious cultural resources, but also a key issue for digital content industries. The meaning, position, and value-added applications of digital archive have been proposed and questioned over and over again. Digital learning has become a way out for digital archive. Moreover, in May of the same year, the “promotion program for enhancing the development of digital content industries” was approved by the Executive Yuan. The “Executive Yuan Digital Content Industry Development Task Force” was formed to overall take control of planning and promotion of digital content industries. And the “Ministry of Economic Affairs Digital Content Industry Promotion Office” was established as the only channel for the promotion and services of digital content industries, to coordinate the government and related departments to work with the academic circle, the business circle, unions, and groups/organizations to promote the development of digital content industries, in hopes of helping traditional industries transform into knowledge industries to enhance the overall competitiveness of the industries in Taiwan [6]. “Digital content” is defined by professionals and scholars as: products or services to digitalize and integrate materials such as pictures, texts, images, voices, and videos, with information technologies. The examples of digital contents are: digital archive and publication, digital learning, internet services, digital video/audio applications, computer animation, digital games, mobile application services, and content software. In the recent years, it was proposed that the digital art industry should be included in the digital content industries as well to make the coverage more complete. The digital content industry framework includes: (a) content materials (sustainable reservation), which are transformed from traditional data format to electric and digital format through technologies of digitalization, (b) digital content (value-added applications), such as search, design, and editing, (c) internet services, such as system platforms, broadband, charging mechanism, and copyright management, (d) media for playing multimedia, such as internet, wireless connection, satellite communication, and digital broadcasting, and (e) receiving devices, such as personal computers, televisions, PDAs, and MP3 players [4][5][6]. For both individuals and groups, the focus of industries is on sustainable management and creative transformation. Sustainable management is the inheritance and continuation of the life of an industry, while creative transformation is the fittest and adaptation of the life of an industry. Sustainable management and creative transformation are symbiotic. “Information communication platform” is a simplified digital archive database. The central idea is to get everyone involved and transform cultural content into creative products through the analysis of traditional cultures, which is one of the research focuses of the national digital archives program [2]. In the literature review, it was found that applying physical interface to interactive exhibition of digitalized cultural relics is different from applying general computer user interface to online exhibition for it can enrich the characteristics of cultural relics exhibitions. And an exhibition interface with interaction can present the fun side of cultural relics and further build a connection between impressions on cultural relics and experiences for intuitive appreciation for digitalized cultural relics [1].

3. The Dough Figure Art.

3.1. Research Methods. In this study, document analysis was first conducted for the dough
figure art of the traditional local creative industries in Taiwan through interviews with experts. With the approve from the art master Jun-De Wu, the person in charge of the Wu Dough Figure Art Centre, a list of works was created with photos taken or videos recorded. After these were organized with physical works, the planning for the structure of a digital archive website had begun. Moreover, out of the passion for dough figure art, Mr. Wu wished to further promote the beauty of dough figure art creative works by offering people who are interested a chance to enjoy the fun of pinching dough by constructing a teaching platform. To meet his demand, a learning platform for dough figure art was also constructed in this study.

3.2. The Origin of Dough Figure Art. The dough figure art is originated in the Han Dynasty. According to the record during the reign of Emperor Xuan Zong in the Tang Dynasty, “in the Han Dynasty, some people arranged dough figures, flowers, and fruits along the streets as items offered to the dead”. Items offered at altars such as dough figures, flowers, and fruits made by dough were called “li-mo” (pastry gifts). The term “dough figure art” was first used in Three Kingdoms Era by Liang Zhu-Ge of Shu Han. He was entitled as the creator of the “dough figure art”. Opinions of the origin of the “dough figure art” are widely divided. It is very difficult to verify for there is no records in the history and it was too long ago.

3.3. Properties of Materials. In the field of sculpture art, there are many materials suitable for pinching. Besides dough clay, which is usually used for dough figure art, potter’s clay, paper clay, wheat clay, robbery clay, and plasticine (polymerclay) are also very common. However, compared with other materials with similar properties, dough clay has always been artists’ favorite due to its superior conditions and thus the number one choice of material. The methods used for dough figure art include “rice sculpting with color mixing” and “rice sculpting with color coating”. The difference lies in the ways colorizing. The Chinese term for “dough figure art” is “nie mian yi shu”. “Nie” means “pinching” and “mian” means “dough”. As implied by the Chinese term, dough figure art is an art of dough figures skillfully pinched by hands. It is a traditional artistry with Chinese colors. It originated from North China, a place producing dough abundantly, which is the main material to make dough clay. Then dough clay is pinched by hands to make creations such as human figures, flowers, birds, fish, beasts, etc, as offerings at altars. They are also works to be appreciated and foods to be eaten.

3.4. Methods of Creation. Methods of creation include basic methods with tools and basic methods by hand. The basic methods with tools include (1) “rolling”, which is a way to use a cylindrical stick to equalize force and roll dough clays into a flat, (2) “pressing”, which is a way to press tools with sharp ends, thin slices, or shaped tubes, sticks, and plats on dough clays to create lines or patterns desired, (3) “plastering”, which is a way to push and plaster with thin sticks between or among molded dough clays to eliminate the lines and make them look like a whole, (4) “cutting”, which is a way to split dough clays with pen knifes or circular cutters when some molded dough clays need to be partly or completely separated, (5) “trimming”, which is a way to trim dough clays with scissors when some molded dough clays need to be partly or completely separated, (6) “drilling”, which is a way to use a stick to drill holes on dough clays from top to bottom, (7) “scraping”, which is a way to pinch dough clays into thin plates with hands while putting them on palms or flat surfaces and then continuously scrap the edges little by little with sharp tools to make decorative lacing, and (8) “painting”, which is a way to paint patterns or colors on completed works using
painting brushes with water-based or oil-based colors. The basic methods by hand includes (1) “kneading”, which is a way to use both hands palm-to-palm or on other flat surfaces to fold and push dough clays over and over to make the materials well mixed and tight, and the dough clays soft, sticky, and malleable, (2) “rubbing”, which is a way to use both hands palm-to-palm or on other flat surfaces to rub dough clays into ball shape, sharp shape, thin shape, long shape, etc, with detailed and smooth surfaces. (3) “pressing”, which is a way to press shaped dough clays with hands from different angles using different strengths to create desired shapes while putting them on palms or other flat surfaces, (4) “pinching”, which is a way to make proper adjustment on shaped dough clays with fingertips of thumbs, forefingers and, middle fingers while putting them on hands to create desired shapes, (5) “rolling up”, which is a way to roll up flat or bar-shaped basic components to create desired shapes, (6) “dotting”, which is a way to attach small and dot-shaped basic components to parts tightly, (7) “pasting”, which is a way to attach flat-shaped basic components to parts, cover them on parts, or combing parts to complete whole creations, (8) “sticking”, which is a way to combine parts into part kits or combine part kits into complete works, and (9) “wrapping”, which is a way to put fillers inside dough clays to save dough clays required to create large works.

4. The Conception of the Website and the Plan for the Platform. In this study, the conception of the digital archive for dough figure art was designed with an interactive exhibition interface. Physical relics were transformed into digitalized ones for interactive exhibition in a simulated 3D form through 2D or 3D computer technologies such as photographing and video recording. Moreover, according to the framework of the website, a digital learning platform was built in hopes of shorten the distance between appreciators and dough figure art. For example, the “online learning” and “appreciation of works of art” offer appreciators more opportunities of personal experiences, to attract more people who are interested to participate in learning activities through the digital learning platform. This is very helpful for the promotion of the cultural creative industries of dough figure art. The structure of the website is shown in figure 1.

4.1. Introduction to dough pinching. The idea of dough pinching was first used to make dough offerings. It was originated from Shandong and Hebei in China. During the Song Dynasty and Yuan Dynasty, in large banquets, there were often figures of famous historical
personages, vegetables, fruits, and animals (beasts or birds) for guests to appreciate before taking their seats. These dough figures were called “kan zhuo (offerings)”. Nowadays, they are very common in Pudu rites in the forms of lively works of birds and beasts, which fully occupy appreciators’ eyes and make them drool. This study elaborates the origins, development process, material properties, and creation methods of dough figure art for the purpose of helping appreciators to know more about the artistic beauty in dough figure art.

4.2. Work Appreciation. With humans’ increasing living standards and intellectual teachings, the creation of dough figure art seems to have to evolve with more creativity. The variety of themes for creations also needs to be enlarged to pique modern people’s curiosity about and interest in dough figure art. By making figures of a whole family or figures of celebrities, it is expected that the gap between dough figure and the public can be incrementally closed, and the purpose of promoting and propagating the idea of blending art into people’s lives and blending people’s lives into art. An interactive exhibition interface was used for the structure of the website for appreciating dough figure art works and for the management of the website. Relics of traditional dough figure culture and the best works selected from the creations of Wu Dough Figure Art Centre were recorded in pictures or videos. After being graphically processed with computer software, these items are exhibited in the form of a 2D or 3D simulated image. It is hoped that appreciators would find this exhibition method fresh.

4.3. Online Teaching. The works by Wu Dough Figure Art Centre have been plagiarized and copied very often, but they have never been surpassed. The main reason is the tolerance to share things with others. The owner and the art master Jun-De Wu said, “It is my wish to promote dough figure art through different channels. I am not worried about the works being copied. I am only worried about no one wanting to copy these works. Therefore, I often go to high schools and elementary schools to teach students how to make dough figures during my leisure time.” Therefore, the art master Jun-De Wu’s explanations and the processes of him making dough figures have been recorded and stored in the online teaching website of this study, for appreciators to learn for free.

4.4. Image Records. Wu Dough Figure Art Centre has been passing on traditional art and cultural activities, cultivating local professionals, and promoting local cultural resources for tourism, so that community inhabitants and tourists can learn more about the traditional customs, unique traditional art, and folk festivals through learning to make dough figures or appreciating dough figure art. It is the promotional education center of the dough figure art in Taiwan which has created business opportunities in the communities and job opportunities for inhabitants. Therefore, this study also included this part as image records such as performance commentary, teaching commentary, and art guide. It is expected that the creative industries of local dough figure art in Taiwan can be well preserved, to serve the purpose of promoting holistic education of art.

4.5. Others (Travel Guide). In the age of creative technology, to promote local cultural business, the mechanism of creativity management and the concept of creative design are required, to bravely break through current limitations, to pique consumers’ interests in purchasing through story marketing, and to create business opportunities for art and culture. Therefore, after several discussions about plans for this study, it was decided that, with the
convenience of building a website, an “Others” area should be included to provide references for visitors to make their travel plans.

5. Discussions and Suggestions. Currently, promoting traditional creative industries of local culture has been a trend in Taiwan. If the value of the artistic beauty of folk art can be preserved and promoted with this trend, it would be a great help to improve the nation’s image of creativity. Therefore, when everyone is promoting the revival of Chinese traditional culture and folk art, there is a very good chance to promote the digital achievement and digital learning platform of “dough figure art” to market “dough figure art” to the world by packing them with modern concepts through methods different from the traditional ones, such as personalized images, avatar design, and promotions in kindergartens, elementary schools, junior high schools, senior (vocational) high schools, colleges, universities, and the society. The skills to make dough figures are very delicate. And the figures made are of great variety and bright colors. The procedure of making dough figures is very simple, easy to learn, and safe. It doesn’t take much time or effort to learn. And the dough clay is very soft, smooth, with perfect stickiness and low price. Making dough figures is an art creation activity for everyone from children to the elderly for it doesn’t take much time to complete a creation. Moreover, it is expected that, after sculptures, ceramics, and colored glaze, dough figure art can become the next traditional Chinese culture to stand on the international stage of arts with the highest honor.

REFERENCES


