APP Design for Xinjiang Traditional Handicrafts

Siyu Li, Yingfang Zhang* and Yiyu Wang
Sino-Korean School of Multimedia Design, Shanghai University of Engineering Science, Shanghai 201620, P. R. China

*zyfang0502@163.com

Abstract. Xinjiang's handicrafts have a deep historical tradition and a strong rustic atmosphere, and have very strong local characteristics and national styles. However, due to the development of modern scientific and technological civilization, and changes in consumption and lifestyle, practitioners have gradually decreased, fewer and fewer craftsmen, and some complex production techniques are in danger of being lost. Using computer digital technology, Apps on smart mobile devices can effectively expand the reach of the audience, and promote the excellent handicrafts in Xinjiang, which can not only stimulate the vitality of the inheritance of intangible cultural heritage, but also help cultural precision poverty alleviation, give full play to the role of intangible cultural heritage and handicrafts to promote poverty alleviation, promote the employment of nearby people and achieve stable poverty alleviation. In this paper, through the dynamic display of Xinjiang handicraft craftsmanship and appreciation of famous products, the public can get a more detailed understanding of ethnic handicrafts, stimulate people's interest in them, and promote the protection and development of traditional ethnic handicrafts in Xinjiang.

1. Introduction
Handicrafts in Xinjiang have a deep historical tradition, but also have a strong rustic flavour. They have extremely strong local characteristics and national styles, and have become a mirror that reflects the local people's living customs, social etiquette, love and hatred. However, due to the development of modern scientific and technological civilization and changes in consumption and lifestyles, people's awareness of national crafts has gradually weakened. With the emergence of a large number of modern industrial products, the manufacture of traditional handicrafts has been greatly impacted, the market is not good, and production has been blocked. As a result, the number of practitioners has gradually decreased, and fewer and fewer craftsmen have mastered the relevant production skills. Craft is in danger of being lost. The protection and development of Xinjiang traditional handicrafts are urgently needed. Traditional knife making skills and Adelais silk weaving and dyeing skills have been included in national-level intangible cultural heritage representative items. [1]

Xinjiang Province is a concentrated and contiguous area of poverty identified by the Chinese state, and the task of overcoming poverty is quite onerous. By the end of 2018, the incidence of poverty in Xinjiang had fallen from 19.4% to 6.1% at the end of 2013. Among them, the industry's poverty alleviation is one of the important measures, including vigorously developing ethnic handicrafts, promoting the employment of the poor in the vicinity, and achieving stable poverty alleviation. [2] Stimulating the vitality of intangible cultural heritage, can help cultural precision poverty alleviation, and give full play to the role of intangible cultural heritage and handicrafts. [3] Discover and develop the cultural industry market, meet the diverse material consumption needs and spiritual aesthetic needs
of people in modern society, create a market atmosphere for Xinjiang non-heritage cultural crafts, promote and disseminate related cultural products on mobile devices, and let Tourists who have not been to Xinjiang feel the characteristics of the traditional ethnic handicrafts, the distinct cultural context and the rich style of ethnic minorities.

If traditional handicrafts are to be given enough attention to better inherit the excellent traditional culture, it is necessary to improve the public's understanding and understanding of national handicrafts. It is very necessary to use modern digital interactive technology to develop apps based on smart mobile devices to expand the spread of Audience. By realizing the appreciation of famous handicrafts and the dynamic display of the craftsmanship, the public can get a more detailed and comprehensive understanding of ethnic handicrafts and stimulate people's interest in ethnic handicrafts. [4]-[6]

Intangible cultural heritage carries the memory of history and continues the blood of culture, and it needs to be passed on lively. Only by advancing with the times and integrating into modern society can we be better protected and inherited. This article selects representative APP such as Adelais silk, carpet, small flower hat and Yingjili knife. Adelais silk is a unique product with very ethnic characteristics in Xinjiang. It is the most popular Uygur woman's silk fabric. Its pattern is said to be a reflection of the religious consciousness of the ancient Uighurs who worshiped the Shamanism and worshipped the tree gods and water gods, and also said that it was a pattern of badan wood grains, comb patterns, and deformed patterns of national instruments. [7]-[8] Xinjiang carpets occupy an important position in the history of the development of carpets in China with their colourful patterns and unique patterns. It can be said that Xinjiang is the origin of carpets in China. From archaeological data, Xinjiang people were able to weave brightly colour velvet blankets more than 2500 years ago. The small flower hat is a craft with decorative beauty. It adopts the traditional methods of embroidery, picking flowers, gold, silver and beads. It is embroidered and woven with various patterns by hand. All of them have bright texture, full of lustre, gorgeous and colourful features. Yingjili Knife is named after its origin in Yingjili County. It is famous for its exquisite shapes, beautiful patterns and sharp edges. Its unique shape, exquisite production, practical and beautiful, can be used for knives, but also have artistic value. The handle of the knife is exquisitely inlaid with silver, copper, jade, gemstones, etc., and is deeply loved by people of all ethnic groups in Xinjiang. The APP will introduce the origin, history, production techniques, materials, etc. of each handicraft through a combination of text, pictures and videos to help everyone understand the beauty of Xinjiang and the exquisite craftsmanship of the people of Xinjiang. [9].

2. APP overall design
The work has functions such as cameras, casual games, sharing diaries, comments, personal customization, and production technology. The specific information frame is shown in Figure 1.
2.2 Icon Design

Figure 2 is the design of several Xinjiang handicraft icons. Figure 2(a) highlights the characteristics of the outer colour of the flower hat, Figure 2(b) shows the softness and unique pattern of Adelaide silk, and Figure 2(c) Express a wide variety of beautifully patterned Yingjili knives.

(a) Flower hat  (b) Adelaide silk  (c) Ingesha knife

The camel, known as the desert oasis, has become our mascot, hoping to convey the message of Xinjiang's vast land. A camel with a cute shape in yellow (see Figure 3) is also suitable for women who are as smooth as jade, which is consistent with the main audience of the work. The icon in Figure 4 is a font designed according to the Chinese name of the work.
2.3 Interface Design
Open the APP client and enter the function selection main interface. The main interface is clear and beautiful. After entering the interface, there are 5 sections, which are the home page section, camera section, casual game section, workshop section and user section. Above the main interface is a sliding module to learn about Xinjiang's customs and culture. The main interface is divided into five different module entrances. Through these several entrances, you can enter different pages.

3. APP panels design

3.1 Photograph panel
Entering the Photograph panel, there will be camera interaction functions related to Xinjiang culture. Seeing the choice of traditional Xinjiang handicrafts Adelais silk, users can experience the interactive function. The different styles of silk scarves are worn on the user using argument reality technology, so that they can more intuitively understand the effect of scarves, and help spread Xinjiang's colourful and strong national culture. At the same time, it increases the fun of the APP. The photos taken can be shared with friends or other social platforms, attracting more users to download and use this APP.

3.2 Casual game panel
The casual game panel mainly uses theme-related games to attract users' interest, and Xinjiang's traditional cultural elements are added to the game. Design 2 types of games.

1. Colouring game. The pictures provided for colouring include the costumes of various ethnic groups in Xinjiang. During the colouring process, users can gradually learn about the patterns of the delicate flower hats of embroidery workers. The material of the colouring game also includes Xinjiang scenery, food, etc. The colouring of the scenes of traditional grand festivals such as the Gulbon Festival, shows the splendour of Xinjiang's multi-ethnic culture.

2. link game. The graphics connected to the game include traditional animal patterns, traditional fruit patterns, and traditional Xinjiang handicrafts such as wood ware, musical instruments, and other patterns on Adelais silk. In the background music, local folk songs such as "Xinjiang is a good place", "Alam Khan", "Girls in Daban City" and "Why are the flowers so red" are chosen to fully demonstrate the unique customs of the Northwest minority.

3.3 Workshop panel
This panel is mainly divided into two parts. One is based on personal customization (see Figure 5). Users can choose their favourite clothing or handicrafts for creation. There are rich Xinjiang unique patterns and colours for users to choose. Personal customization means unique, but also highlights its uniqueness, and meets users' needs for personalized creative products. With the development of the times, private ordering is a development trend in the future, and the market prospect is broad, making the product both practical and ornamental, and this APP is targeted at young women aged 20 to 35. It also caters to young people's demands for personalization and meets the needs of user experience.
The other part mainly introduces the manufacturing process of traditional Xinjiang handicrafts. For example, the production of Adelaide silk requires the following steps. First, silkworm cocoons are boiled, drawn, shuffled, and rolled, and then subjected to tie-dyeing, pattern design, and bundling, and finally divided into threads, machine, and weaving to form a finished product. Pictures and videos are added to help users better understand.

4. Conclusion
Xinjiang's excellent traditional handicrafts are an important part of Chinese minority culture, and have immeasurable practical value and good development prospects. However, due to factors such as the remote geographical location of Xinjiang, most people know little about there. Reluctant to spend a lot of time reading the books and materials, this APP solves this problem well. With the development of the times and the advancement of civilization, the inheritance and development of traditional culture have received more and more attention. The development of this APP has strengthened people's traditional cultural identity and strengthened cultural self-confidence. It played an irreplaceable role. Although the application and promotion of this article still faces some problems and difficulties, its advantages and application prospects are very optimistic. It can make a traveller who has never been to Xinjiang feel the characteristics and cultural charm of Xinjiang ethnic handicrafts.

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