

# A Study of Education Plan for Beauty Design Applying *Danyusemungyeong*

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## Abstract

This study applies the pattern of *Danyusemungyeong* (Bronze mirror with fine linear design and a pair of knobs) with the most original one in the Bronze Age of Korea Peninsula and excellent craftsmanship and attempts to give rebirth as a cultural product expressing Korea's original characteristics. Also, it shows the unit patterns of *Danyusemungyeong* to learners and seeks to find a plan for education to improve their ability of applying design through that. The results of the students obtained after an analysis of the geometric works applying the unit patterns of *Danyusemungyeong* and lines or curves of nail artists during the class was excellent as in Table 5. It was found that the development and prospect of the designs of beauty cultural products through the education like this is expansive and it could be an important factor in creating new designs through the learners' historical consciousness and understanding of Korean culture.

**Keywords:** Cultural Product, *Danyusemungyeong*, Korean Culture, Nail Artist, The Geometric Works

## 1. Introduction

At the time of cultural competition of the 21<sup>st</sup> century, the development of high value cultural products that have succeeded and reproduced a country's excellent cultural heritages is one of each country's main agendas. In a research process of "A Study on Domestic and Overseas Museum Collections of Korean and Western Ancient Metal Mirrors", the creativity and craftsmanship of *Danyusemungyeong* and its usability as cultural products could be found. In other words, *Danyusemungyeong* is a mirror in a unique shape in the Bronze Age of Korea, which had significant differences from the mirrors of China, so it was confirmed that designs apply this might be higher value-added products. Thus, this study came to be carried out.

The human desire for beauty has continued since the beginning of the existence of mankind until the present, which may be represented by the beauty industry. The Council on National Competitiveness<sup>1</sup> defined the beauty industry as including service industries such as hair care, skin care, make-up, nail and the related manufacturing industries. In addition, the coefficient of added value induced from the beauty industry is 0.931, which is higher

than that of the service industry of 0.894 and that of the cosmetic industry of 0.809 and it is the industry with the highest development potential, thus, further studies of this should be carried out continuously<sup>2</sup>.

South Korea Ministry of Education demands a variety of learners-centered education with the development of global human resources as the major agenda. However, Korea's educational policy is led by the Government and various plans for future education are researched by theses and research projects by the government agencies, but still, teacher-centered education is mainly conducted in the educational fields<sup>3</sup>.

Therefore, this study will find a plan for the development of designs applying *Danyusemungyeong*, Korea's ingenious mirror, its development potential to cultural products and an efficient education of learners.

## 2. Methodology

### 2.1 Research Methods

Research methods of this study are as follows:

- Preceding studies and museum-related literature reviews.

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- Three times of museum field survey (Applied for the use of images at the Korean Christian Museum at Soongsil University).
- Analysis of nail artists' geometric works through nail collection (Allowed to use the collection); and
- Presentation of a draft proposal of nail designs through the undergraduate and graduate courses that the author was in charge in the second semester of 2014 (Allowed to use the materials from students).

## 2.2 Research Contents

This study will propose a plan for the application of the characteristics and designs of *Danyusemungyeong* and briefly, suggest the basic theories for the understanding of them below. In other words, Chapter 3 will look into the characteristics of *Danyusemungyeong* focusing on its unit pattern. Chapter 4 will analyze nail artists' works using geometric patterns, present the results of students' nail designs applying *Danyusemungyeong* in the undergraduate class hours that the author is in charge and propose a plan for education applying *Danyusemungyeong* discussed in the graduate class. This aims, first, to help the undergraduate students understand Korean culture correctly, improve their selfesteem and creativity and create designs as cultural products. In the meantime, this study discusses the results of the undergraduate students with the graduate students specialized in nail art teaching at other educational institutions to find a plan for the education of the design of cultural products and a teaching method.

A brief summary of the basic theories for the understanding of this study through Doosan Encyclopedia<sup>4</sup> and preceding studies<sup>1,2,5-11</sup> is suggested as follows.

### 2.2.1 Definition of Mirror and Donggyeong

A mirror is a tool to reflect the look of an object using the reflection of light<sup>4</sup>, which started from *Sugyeong* (Water mirror) and has been used in various types such as *Seokgyeong* (Stone mirror), *Geumsokgyeong* (Metallic mirror) with functional, decorative and symbolic features till now. In his thesis, Yang-su Yi<sup>5</sup> noted that mirrors are mostly studied through relics or records<sup>5</sup>; in spite of differences by the combination of materials, both Eastern and Western countries have used *Donggyeong* (Bronze mirror); and there are knobs in European mirrors while round *Geumsokgyeong* gripped with a string is the mainstream in China and Far East Asia<sup>4,5</sup>.

*Donggyeong* is a bronze mirror that has been widely used prior to the spread of mirrors made with glass<sup>4</sup>. In his thesis, Yang-su Yi<sup>5</sup> noted that as Bronze Age *Donggyeong* in the Korean Peninsula, *Da-nyugyeong* (mirror with two or more *nyu* (knobs)) different from Chinese Han mirrors was excavated first, but as Han mirrors flowed in since *Hansagun* (the four Commanderies of Han) were installed in 108 B.C., it gradually changed into *Dannyugeong* (mirror with a single knob). *Donggyeong*, though it differs depending on the scholar, is broadly divided into *Jomungyeong* (bronze mirror with coarse lines) and *Semungyeong* (mirror with fine linear design). In general, it is called *Semungyeong* if the width of the pattern carved in the back face (back side) is slim lines of 0.1~0.2mm while it is called *Jomungyeong* if it is coarse lines of 0.5~2mm. *Donggyeong* also has a special symbolic significance and role as a symbol of the expression of the priest's divine force in addition to the purpose of a simple living object<sup>5,11</sup>.

### 2.2.2 Definitions of Pattern and Geometric Pattern

A pattern (紋様, 文様, pattern and ornament) is one of the elements of aesthetic expression forming the formative arts along with form (or shape) and color, which refers to various designs decorating the surfaces of the formative works of art such as architecture, sculpture, crafts and design<sup>4</sup>.

Starting with the beginning of the existence of the human race, patterns are the reflection of subjective consciousness of living, the products of cultural activities through life and the results of creative civilizations. Therefore, patterns have great significance since they express sentiments and cultural characteristics of each region, nation and era most purely and clearly.

The style of pattern is broadly divided into natural pattern produced from nature and decorative pattern created by human intention, but the opinions of the style of pattern vary depending on the scholar<sup>6</sup>.

The expression of geometric pattern is the one used as a material to express the emotions of the times in both Eastern and Western countries regardless of period<sup>4</sup>.

Geometric pattern is the most simple and distinct shapes obtained by simplifying nature and removing unnecessary elements, which is an abstract form composed by the crossing of straight lines or curves. Korea's geometric form is the one converted to an image from the shape of an object that appeared concisely by necessity in nature.

### 2.2.3 Definitions of Cultural Industry and Cultural Product

Act no. 11845 is the Framework Act on the Promotion of Cultural Industries.

Among them, in particularly, Article 2.1 is the term “cultural industries” means industries engaged in the planning, development, manufacturing, production, distribution, consumption, etc. Of cultural products and services related thereto. Also, Article 2.2 is the term “cultural products” means tangible or intangible goods which create the economic value added, in which artistic value, originality, entertainment and popularity are embodied, the services related thereto and the combination<sup>7</sup>.

The 21<sup>st</sup> century is an era of culture and in the world economy, the paradigm of industries are turning into the culture industry. The transition from an industry into a culture is to create designs for a more enhanced life by grafting the value of design at the dimension of everyday life. In addition, the cultural industry is segmented and develops into various commercialized genres and the beauty industry in which men try to pursue beauty is a representative one. Rae-soo Kim in his thesis classified the beauty industry into cosmetics industry, beauty service industry and beauty health industry and suggested that the beauty service industry should be specialized and segmentalized into hair, beauty, skin, makeup and nail art so as to correspond to consumers' trends<sup>2</sup>.

In his thesis, Chung-ho Kim<sup>8</sup> argued that cultural products should have cultural decency and image in addition to the role of commodity and of the cultural products he suggested, those related to this study can be summarized as follows:

In Table 1. the above Diadem Ornament is a hand mirror decorated with a knob applying the Arabesque

pattern of Buddhist lotus flower and the one below is a bookmark applying the sun pattern of *Donggyeong*.

## 3. Findings

### 3.1 Characteristics of *Danyusemungyeong*

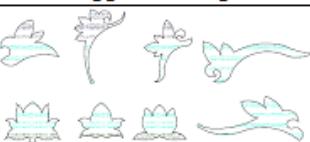
*Danyusemungyeong* is a bronze mirror in vogue from the late Bronze Age to the early Iron Age, with two or more *nyu* and a pattern based on a pattern of delicate triangular lines at the back face. Since its geometric design got more diverse and subtle as compared to that of *Jomungyeong* in the former part of the Bronze Age, it is also called a mirror with fine linear patterns.

In preceding studies, it was found that designs of delicate triangular lines and circles mostly were used in *Danyusemungyeong* and since the triangular pattern symbolizes rebirth and female genitals, the arrays of triangular designs can be regarded as icons of fecundity and femininity and the circle symbolizes the sun.

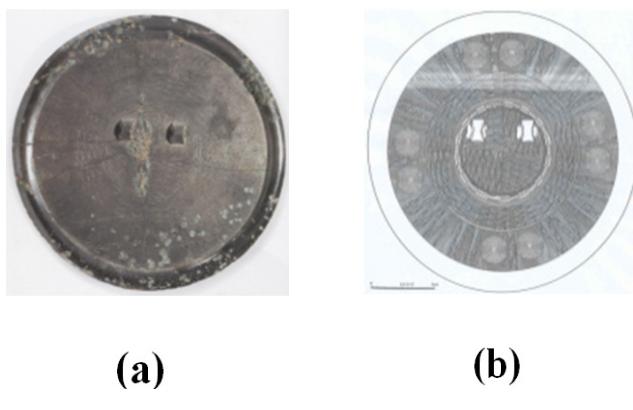
In his thesis, Yang-su Yi said, “*Danyusemungyeong* shows the most outstanding production technology among the artifacts in the Bronze Age in the Korean Peninsula<sup>9</sup>”. He added that all *Danyusemungyeong* have almost the same shapes of edge and *nye* and the sections of unit patterns could be used as their properties and suggested the material quality of the cast, bronze, trimming and usage as the characteristics of *Danyusemungyeong*, the National Treasure of Korea No. 141. “A Comprehensive Report on *Danyusemungyeong* in the Korean Christian Museum at Soongsil University” notes that its cast is made of earth and presumes that a man of power used it through identifying the abrasion of its *nyu* part<sup>10</sup>.

To sum up the preceding studies, *Danyusemungyeong* is most sophisticated and largest of the currently existing ones, which has a diameter of 21.2cm and it is held and

Table 1. Example of cultural products<sup>8</sup>

Actual relics	Suggested design	Cultural products
		
		

displayed in the Korean Christian Museum at Soongsil University<sup>10</sup>. The materials of the mirror are cupronickel alloyed with a lot of tins, which reflects light better; at the back of the mirror, there are two knobs above the center; it is divided into inner, middle and outer circles; and its concrete forms i.e; shown in below Figure 1.



**Figure 1.** (a) *Danyusemungyeong*<sup>10</sup> and (b) Drawing of restored *Danyusemungyeong*<sup>9</sup>.

The unit patterns of *Danyusemungyeong* based on “Comprehensive Research of *Danyusemungyeong*, the National Treasure of Korea No. 141 held in the Korean Christian Museum” published by the Korean Christian Museum at Soongsil University<sup>9</sup> and Jeong Jae-eun’s thesis<sup>11</sup> are as follows:

In Table 2. the patterns are formed around triangle, diagonal line and circle, which are broadly divided into straight line, diagonal line and concentric circle. This table was drawn to help learners understand *Danyusemungyeong* and improve their ability of applying it to designs by analyzing its unit patterns.

**Table 2.** Unit patterns of *Danyusemungyeon*<sup>9,11</sup>

Resear-ch-er	Circle	Diagonal line	Triangle	Compound pattern	Block pattern
Yang-su Yi					
Jae-wook Lee					
Ji-eun Jeong					

### 3.2 Analysis of Nail Artists’ Works Applying Geometric Patterns

*Danyusemungyeong* is a typical example of geometric pattern, and this study tries to help students have inspirations and ideas for designs applying *Danyusemungyeong* by analyzing nail artists’ works applying geometric patterns and teaching them. There are several nail associations and nail collections and of them, “Bongsoongasontop<sup>12</sup>” was analyzed since it keeps publishing collections applying Korean design elements and shows nail works with various techniques and skills. 9 volumes of “Bongsoongasontop<sup>12</sup>” have been published and Volume 8 focused on Korean design elements and Mi-won Kim could find works for the globalization of Korean designs, also in Volumes 1 through 3.

#### 3.2.1 Trend of Nail Works Applying Lines

Straight line and diagonal line designs used in *Danyusemungyeong* are mostly triangular designs, which symbolize women. Generally, straight line is masculine and strong while diagonal line shows dynamics. The nail artists’ works mostly used diagonal lines and the whole images were dynamic. The background colors were mostly white or black and mostly flat works were the mainstream except for Volume 9.

#### 3.2.2 Trend of Nail Works Applying Curves

As mentioned earlier, the concentric circles used in *Danyusemungyeong* symbolized the sun, but generally, concentric circles are curved, feminine, lovely and soft images and feminine images could be found in the works using them as shown in Table 4. Compared to the previous straight lines or diagonal lines, it was found that

**Table 3.** Trend of nail artists' works applying lines<sup>12</sup>

Vol. 1	Vol. 2	Vol. 3	Vol. 4	Vol. 5	Vol. 6	Vol. 7	Vol. 8	Vol. 9
Kim, Miwon	Kim, Miwon	Sung, Hyejin	Ju, Sunae	Kang, Shehee	An, Hyojae	Jang, Inhee	Nam, Inja	Lee, Eunzung

**Table 4.** Trend of nail works applying curves<sup>12</sup>

Vol. 1	Vol. 2	Vol. 3	Vol. 4	Vol. 5	Vol. 6	Vol. 7	Vol. 8	Vol. 9
Park, Selang	Kim, Mijung	Seo, Sangmi	Nam, Inja	Sung, Mijin	Yu, Shinae	Park, Hypjin	Han, Mijin	Lee, Minha

there were more various background color techniques and three-dimensional works.

### 3.3 Draft for Designs Applying *Danyusemungyeong*

The unit patterns of *Danyusemungyeong* and the nail artists' works were presented to the undergraduate class,

“Photo illustrations” in J. University the author was in charge and the students were asked to design nail arts in square and overall shapes applying them. In addition, the graduate students in the Doctoral Course in K. Graduate School the author was in charge were asked to select works that could be applied to actual nail arts and expressed the images of *Danyusemungyeong* well among the results of

**Table 5.** Works applying *Danyusemungyeong*

Motif Unit	Nail Artist Work	Male S (Student).	Female S.	Backup work	Remark

the designs by the undergraduate students, and the results are like Table 5 below.

Previously, there were classes suggesting designs applying Korean images such as *Danyusemungyeong* or patchwork as assignments, but the results were too conventional. For this class, detailed unit patterns were presented directly and as a result, more refined design results could be obtained "Photo illustrations" Class consisted of 2 male students and 34 female students and both male and female students had hardly used Photoshop before the class and most of them were not majored in nail arts. The male students used black, red and blue colors, attached the proposed motif color or applied them in abstract patterns to show powerful images. The female students used various colors and cubics, showing brighter and more feminine images compared to the male students. In the meantime, backup works were presented after the colors of the students' designs were replaced and complemented using Photoshop.

In addition, in the doctoral students evaluated the undergraduate students' design results and proposed this teaching method and they said that they were helped regarding its potential for the application to nail arts as cultural products, curriculum and preparation for their's student graduation exhibition.

This study could find the works applying lines or curves through nail artists' works. As a result of the class after the analysis of detailed unit patterns of *Danyusemungyeong* and the nail artists' works, the author could get results showing the potential for its development into cultural products. It is judged that the prospect for the development of designs through beauty cultural products through such an education would be bright. In addition, it is hopeful that this would be a class plan graduate students and undergraduate students' desire.

## 4. Acknowledgment

This study was supported by that to find a plan for beauty designs applying *Danyusemungyeong* and an educational method in Korea.

*Danyusemungyeong* is a bronze mirror in vogue from the late Bronze Age to the early Iron Age, with two or more *nyu* (knobs) and since its geometric designs got more diverse and subtle than *Jomungyeong*, it is called a mirror with fine linear patterns.

Yang-su Yi said, "*Danyusemungyeong* shows the most outstanding production technology among the artifacts

in the Bronze Age in the Korean Peninsula<sup>5</sup>"

To sum up the preceding studies, *Danyusemungyeong* is most sophisticated and largest of the currently existing ones, which is held and displayed in the Korean Christian Museum at Soongsil University and it was examined based on "Comprehensive Research of *Danyusemungyeong*, the National Treasure of Korea No. 141 held in the Korean Christian Museum" published by the Korean Christian Museum at Soongsil University and Jeong Jae-eun's thesis as shown in Table 2.

There are several nail associations and nail collections and of them, "Bongsoongasontop," which keeps publishing collections applying Korean design elements, was analyzed. The nail artists' works mostly used diagonal lines and the whole images were dynamic as shown in Table 3. Feminine images could be found in the works using concentric circles as well (Table 4.) and compared to the previous straight lines or diagonal lines, it was found that there were more various background color techniques and three-dimensional works.

Previously, there were classes suggesting designs applying Korean images such as *Danyusemungyeong* or patchwork as assignments, but this class could obtain more refined design results by presenting detailed unit patterns directly as shown in Table 5. Through this, it would be necessary to develop a teaching method considering the characteristics of the students.

Through the nail artists' works apply lines or curves could be found and the class through analysis of detailed unit patterns of *Danyusemungyeong* and the nail artists' works was more efficient for the students and it is desired that developing designs of beauty cultural products through this education would continue.

It is hopeful that in the future, studies of designs that can show Korean beauty would continue and that developing ingenious Korean cultural products like *Danyusemungyeong* would continue in the future.

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